

Economic and Community Development Outcomes of Healthy Food Retail



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Executive Summary

The research and debates about the relationship among local food environments, purchasing and eating behaviors, and health outcomes have rarely explored the other important benefits associated with healthy food retail: New grocery stores, corner stores, farmers' markets, and other food retailers can generate a significant economic stimulus for communities in general and for communities of color and low income communities in particular. This white paper has culled select examples and evidence to illustrate the importance of considering the actual and projected economic impacts of healthy food retail. Given the massive degree of innovation underway in at least eight broad categories of food policy, the next several years will provide an unprecedented opportunity to determine what is working, and analyze the economic changes that arise from these new trends and strategies. This paper therefore seeks to encourage researchers and policymakers to consider the economic aspects of improving access to healthy food, in addition to the health impacts, which have been the traditional area of study. The paper does not present an exhaustive economic analysis of all models for improving healthy food access. For example, mobile markets are among the emerging strategies not covered in this analysis that should be considered as researchers and advocates continue to bolster the evidence base for economic impacts of healthy food access. This paper examines the following types of innovations in food retailing, distribution, and production:

- **Financing incentives for new or upgraded full-service grocery stores.** Grocery stores can serve as significant local economic drivers by generating tax revenues, creating jobs, improving housing values, and acting as anchors for further commercial revitalization. The Pennsylvania Fresh Food Financing Initiative has spurred a new wave of similar financing strategies to help expand and attract grocery stores to underserved communities.
- **Corner store and bodega conversions.** Many neighborhoods do not have access to full-service grocery stores, and not all communities are able to support them. In these situations, corner stores or bodegas often serve as the primary source of food retail. Corner store conversions have met with mixed results, but healthy corner stores can be profitable when owners are motivated and the appropriate assistance is provided to decrease barriers to stocking healthy choices and drive consumer demand.
- **Campaigns to promote buying local food.** Buy-local campaigns can be utilized to increase sales of local produce, meat, and dairy products. From a macro perspective, these shifts in purchasing preferences may represent substitutions rather than net economic gains, but small towns, rural communities, and smaller local farmers and ranchers do especially tend to benefit economically from increased local purchasing.
- **Urban agriculture.** Across the nation, the practice of urban farming has been reemerging as a strategy for improving food access and stimulating economic revitalization in underserved neighborhoods. Urban agriculture enterprises that couple packaging and processing operations with cultivation are typically able to create a considerable number of jobs; and those projects that offer basic job training skills can serve as a strategy for bringing some of the hardest-to-employ groups into the labor force.
- **Community gardens.** Typically smaller operations than urban agriculture initiatives, community gardens offer a relatively easy-entry model for improving healthy food access and generating economic and community development. Community gardens tend to yield a high return-on-investments—estimated at a one to six ratio of dollars invested to value of produce raised—and are estimated to generate revenues of up to \$90,000 per acre.¹
- **Farmers' markets.** In recent years, farmers' markets have been growing in popularity nationwide. In addition to offering fresh local foods and goods, markets often stimulate local entrepreneurship and can serve as vibrant community gathering places that foster social cohesion. A number of markets across the country have also begun accepting federal nutrition assistance benefits and have created incentive programs to leverage these funds and increase the purchasing power of low-income consumers.
- **Federal nutrition assistance programs.** The Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Assistance Program for Women Infants and Children (WIC) are two federal

programs that are designed to help low-income families meet their nutrition needs. The redemption of SNAP and WIC benefits in local stores and markets provides an economic stimulus that impacts the broader community by generating jobs and additional spending.

- **Regional models such as food hubs.** Food hubs are emerging as a potential key strategy for maintaining the economic viability of small to medium local farms by providing centralized coordination of supply-chain logistics. As such a new tactic, full-scale economic impact is difficult to summarize, as the impact of each hub varies depending on size, scope, geography, and other independent factors. However, early indications suggest that food hubs can serve as important local and regional economic stimulants.

As a result of this analysis, the following recommendations have been identified as opportunities to better understand, promote, and advance the economic benefits of improved healthy food retail:

- Broaden research about healthy food access to include economic benefits in addition to nutritional improvements.
- Document and evaluate the implementation of the Healthy Food Financing Initiative and similar models at federal, state, and municipal levels.
- Track economic impacts of SNAP and WIC benefit redemption.
- Expand and document outcomes of initiatives that increase the spending power of low-income consumers to purchase healthy foods.
- Learn from and replicate programs that provide job skills training and leadership development.
- Encourage greater collaboration among local entities in understanding the possibilities of innovative food retail models to serve as economic development strategies.
- Further explore savings generated by local food production as it relates to transportation costs.

Introduction

Improving access to healthy food in low-income communities and communities of color in both rural and urban settings goes beyond improving diet and health outcomes—bringing new food outlets into underserved areas can also provide an economic stimulus in communities that may need it most. Grocery stores often serve as anchors that spur local economic development by creating new jobs, revitalizing commercial districts, improving nearby housing values, and generating additional tax revenues.² Local healthy food retail outlets also serve to capture local consumers’ dollars that may otherwise be spent outside of the neighborhood or small town; and at a larger geographic scale, the increased distribution of local healthy food can be a significant positive influence on regional economies. A number of real-world examples support this concept; at the level of a state, in Iowa, a 10 percent increase in fruit and vegetable purchases from local sources would translate to over 4,000 new jobs, \$112 million in income, and \$302 million in new industrial output.³ While not all improvements in healthy food retail result in such significant economic gains, neither is this scenario an anomaly—many other similarly promising examples are shared throughout this paper.

A period of widespread innovation, if not disruption of the conventional forms of food retailing, offers an opportunity to gather and assess evidence about the economic impacts of newly emerging models. The traditional supermarket sector is being challenged by competition from different types of grocery retailers, from chains of specialty stores to big box discounters.⁴ Underserved neighborhoods have been passed over for decades by “mainstream” supermarket chains.⁵ Barriers to entry such as: higher urban land, labor, and utility costs, more stringent development regulations, fewer opportunities for financing, scarcity of sites that accommodate standard big-box store sizes, low profit margins on perishable food items, depopulation of urban city cores, high crime rates, and general stereotypical assumptions about income, race, and neighborhood reputation have historically dissuaded grocery store operators from locating in low-income communities and neighborhoods of color, especially in urban areas.^{6,7} However, the trends may be starting to shift, as grocery store and other kinds of healthy food outlets appear to be reentering previously disinvested communities, perhaps in response to healthy food financing policy initiatives; but also due to the fact that retailers have begun reexamining underserved communities as a means for continuing corporate growth in the face of the saturation of suburban communities, and as they notice the success of other retailers in these markets.⁸ Additionally, the movement toward local production, distribution, and consumption is creating a diverse array of new ways by which families are shopping for food.⁹ While significant progress is being made, there is still much to be done to get to a scale in which regional food systems ensure access in every community. All of these trends and changes are generating different kinds of local economic impacts, and there is a need to better document and understand them, incorporate their assessments into our understanding of economic impact, and ultimately refine future investments in the food environment.

This white paper delves into the connection between improved healthy food access and resulting economic and community development. The purpose is two-fold—to encourage researchers to include assessment of economic outcomes in their healthy food access research agenda; and to provide an evidence base to support decision makers in advancing policies to improve healthy food access in their jurisdictions. Most obviously, economic benefits include jobs and tax revenues, but the full extent of the added values is much broader—including attraction of other businesses and services to underserved areas, increased home values, and reinvestment of profits and in-kind support in the community. While grocery store attraction is an especially promising strategy, this paper also explores the impact of other models of healthy food retail on economic development. Additionally, this discussion will touch upon the implications of the expansion of local food access for regional development patterns and transportation systems, and conclude by parsing the important research questions triggered by the new trends in local and regional food systems.

Examples from the Field

For more than two decades, researchers have been building the body of evidence to support the connections between access to healthy food and decreased obesity rates and other diet-related diseases. The general trend of the accumulated evidence is that having easier, practical affordable options for purchasing healthy food makes a positive impact on purchasing and eating behaviors over time.¹⁰ * The causal chain between retail food access and health outcomes is complex, and does not lend itself well to a single analysis which can account for every step in the relationship and every factor that influences obesity and other food-related chronic health problems. However, evidence continues to suggest a connection among access, eating habits, and obesity rates.^{11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26} In addition, many researchers who had identified and analyzed “food deserts” and their effect on community health have begun to clarify that access is more multifaceted than simply the presence or absence of a store, and to empirically reinforce the various ways in which the lack of practical access is a serious problem worthy of public action.²⁷ For the time being, at least, philanthropic, state, and federal healthy food financing initiatives are taking unprecedented steps forward, accumulating and distributing loans and grants to renovate existing and create new outlets in underserved communities.^{28, 29}

Grocery Stores

Even during times of economic downturn, and even when its established business models are threatened on many fronts, the grocery store industry is huge—reporting sales exceeding \$540 billion in 2011, employing over two million people on a payroll of more than \$50 billion across the United States.³⁰ It is estimated that 24 new jobs are created for every 10,000 square feet of retail grocery space.³¹ Given that the average supermarket ranges from 20,000 to 50,000 square feet in size, one new store could generate between 48 and 120 new jobs.³² The economic benefits of a grocery store situated in a community are not limited to jobs and income. Home values also improve with improved accessibility to neighborhood retail—including grocery and other food retail outlets.³³ For example, in Philadelphia, home values near new grocery stores have seen a four to seven percent increase in value.³⁴ Other economic impacts of healthy food retail development include preventing leakage of local dollars (which refers to the amount of dollars that flow out of one local economy into another) and creating induced effects (which describe how the economic activities of one industry are linked to other industries within the local economy). The total economic impact of a particular sector is the sum of its direct, indirect, and induced effects, and the ratio between the total economic and direct impact is described in terms of a multiplier. Grocery stores generate direct effects on the economy through the activities related to operation, management, packaging, and shipping. Indirect impacts occur when these activities require purchases of goods and services such as building materials from local or regional suppliers; induced impacts occur when workers involved in direct and indirect activities spend their wages in the local economy.³⁵

Grocery stores are not limited to serving as economic drivers in urban communities. In fact, they may be even more substantial as anchors in rural communities, contributing significantly through local taxes, charitable giving, direct employment, and the local multiplier effect.³⁶ For example, the local grocery store in Onaga, Kansas, was the anchor of the town’s business district until it burned down in 2010. After the loss, residents had to drive over 25 miles to the nearest grocery store, and other local businesses such as the hardware store and pharmacy began to suffer as people started doing all of their shopping in the towns where they were purchasing their groceries. The Onaga City Council recognized the importance of a local grocery store to the

* *The Grocery Gap* is a research report providing a detailed discussion and review of over 130 studies on access to healthy food.

overall vitality of the town, and aggressively pursued operating and financing options to open a new store—even directly providing \$375,000 toward the project.³⁷

One of the most successful and widely known grocery store attraction strategies is the Pennsylvania Fresh Food Financing Initiative, and its record provides the most detailed accounting of impacts.³⁸ Launched in 2004, this public-private partnership has helped develop or improve 88 supermarkets and fresh food outlets in underserved rural and urban areas throughout the state, creating or retaining over 5,000 jobs in those communities. A single store in Philadelphia also generated a \$540,000 increase in local tax revenue. The program as a whole has improved healthy food access for more than 400,000 Pennsylvania residents. Making this happen required just \$30 million in state seed money. The state funds have thus far been leveraged into projects totaling over \$190 million.³⁹ The program continues to dramatically improve access to healthy food statewide, while also driving meaningful, long-term economic development.

The Pennsylvania model has taken hold across the country—garnering bipartisan political champions as well as support from the grocery industry, and sparking similar models in other states as well as at the national level in the form of the federal Healthy Food Financing Initiative (HFFI), and other efforts to improve access to healthy food.⁴⁰ A core tenet of HFFI programs is the one-time infusion of support, with the need for the project to prove its long-term sustainability in order to be eligible. This support at the national level comes out of three agencies—the Department of Health and Human Services (HHS), Treasury, and the Department of Agriculture (USDA). Millions of dollars in federal funding flow from these agencies into communities—primarily in the form of loans, grants, and New Market Tax Credits (NMTC)—via Community Development Financial Institutions (CDFIs) and Community Development Corporations (CDCs). Private entities are eligible for NMTCs as well as some of the USDA resources available through this initiative. Farmers’ markets, which are included in the USDA approach, can also be funded through government agencies.⁴¹ The national program has a similar commitment to public-private partnership arrangements as the Pennsylvania model and relies on agency funding to be leveraged with private dollars. USDA and HHS are relatively prescriptive about how funding may be used, while Treasury allows CDFIs the ability to be more flexible and identify multiple uses for the funds. In all cases, though, the projects that are funded are designed to serve the dual purpose of facilitating access to healthy food options as well as creating jobs and business development opportunities, particularly in low-income communities.⁴²

At the state level, the California FreshWorks Fund is an innovative twist on the original Pennsylvania model.⁴³ While the state has passed legislation codifying a California Healthy Food Financing Initiative, the fund was developed as a public-private partnership between philanthropy and the private sector. The fund has currently raised \$264 million to invest in healthy food retail opportunities in underserved communities through low-interest loans, equity investments, and grants. In addition to Pennsylvania and California, healthy food financing models are beginning to take hold in a number of other states and cities across the country.⁴⁴ A recent report written for the U.S. Treasury Department by The Reinvestment Fund and the Opportunity Finance Network identified 1,519 communities across the country where supermarkets do not exist today, and where the unmet demand within the community is large enough to support a full-service grocery store.⁴⁵ The existence of these untapped markets, coupled with these new incentive programs, provides an environment ripe for expanding healthy food retail through grocery store development.

The figures cited above do not include the jobs and economic stimulus related to the construction or renovation of grocery stores. For example, in Vermont, the food industry has directly created 13,780 jobs in the state and generated \$3 billion in state economic activity.⁴⁶ Between direct and induced impacts—which include construction—Vermont’s food industry is responsible for about 15 percent of the state’s overall economy.⁴⁷ In 2011, 95 construction jobs in Vermont were tied to the food industry, generating nearly \$4 million in wages and over \$9 million in overall economic impact. Based on Vermont’s share of the U.S.

population, and assuming similar economic activity and development across the country, it can be projected that approximately 47,500 construction jobs in 2011 were directly tied to the food industry.

Many full-service grocery stores—both locally owned and operated and national or regional chains—often spur community development through local giving programs as well. For example, the community and economic development generated by the local New Seasons Market chain in Portland, Oregon, does not end with the over 2,300 local jobs created since 2000. The stores have donated over 1,040 tons of food to Oregon Food Bank–approved organizations, contributed 10 percent of after-tax profits back to local nonprofits each year, and volunteered more than 360 hours of local community service, not to mention their internal policies to promote environmental sustainability, including composting, recycling, and using alternative energy sources. The New Seasons Market chain is an especially good example of spurring local economic development throughout the food system, as they give priority to local farmers—sourcing a third of their products from the “Home Grown” region of Oregon, Washington, and Northern California.⁴⁸ And the regional grocery chain engages in all of these activities while continuing to grow and expand their business operations.⁴⁹

Corner Stores and Bodegas

Building a new full-service grocery store is not always the best or most feasible option for enhancing healthy food retail. Improving or expanding existing smaller retail operations— such as corner stores and bodegas— are viable strategies that also offer economic stimulus. In many urban neighborhoods and small towns, corner convenience stores or bodegas are the only nearby retail outlets where families can purchase food to be prepared at home. For low-income people living in food deserts, these stores may serve as the primary places for redeeming federal food assistance program benefits.⁵⁰

Although corner stores and bodegas certainly occupy less physical space and offer less product diversity than full-service grocery stores, particularly fresh fruits and vegetables, they still represent a significant economic force in the marketplace. When paired with the broader convenience store sector—including national chains, such as 7-Eleven—it is an over \$680 billion industry with an estimated 148,126 stores nationwide.⁵¹ While the national brands are more recognizable, “mom-and-pop” style operations actually dominate—accounting for nearly 63 percent of stores; and the largest growth rate is occurring among single-store operated retailers.⁵² Admittedly, motor fuel sales account for the majority of convenience store revenues, but “food service” sales (including prepared and packaged foods and beverages) are becoming an increasing priority for many stores—on the average comprising more than a \$250 million in sales nationwide.⁵³

Full-service grocery stores are often preferred over corner stores and bodegas as the place to shop for healthy food; but some neighborhoods and especially rural communities lack full-service grocery stores.^{54,55} While innovative steps are being taken to address the barriers to attracting larger stores to low-income communities, the challenges are still great. In communities where corner and convenience stores and bodegas are the only food retailers, improving access to healthy food offerings can have a significant economic (and potential health) impact. Stores can make money selling healthy foods. Profit margins on dairy, bread, meat, and fresh produce can range from 25 to 50 percent and can be more than 100 percent for prepared healthy choices like pre-cut fruit or salads.⁵⁶ When corner stores stock and sell fresh healthy food successfully, it creates a win-win situation for store owners (who can increase profits) and residents (who have better access to healthy choices); but results for healthy corner store initiatives vary greatly, and rely heavily on owner motivation and consumer shopping patterns and preferences.⁵⁷ Local policy can play a role in increasing the odds of success for healthy corner stores. Through zoning ordinances, tax incentives, and targeted financial or technical assistance, cities can support corner store and bodega owners in efforts to improve the offerings of healthy foods and beverages in their stores.⁵⁸

In 2006, the New York City Health Department launched the Healthy Bodegas Initiatives. Targeted in New York neighborhoods with the highest rates of poverty and chronic disease (South Bronx, North and Central Brooklyn, and East and Central Harlem), the goal was to improve access to and demand for healthy foods in these underserved communities. Part of the reason for targeting bodegas was because they comprised a large proportion of the food stores in these areas (more than 80 percent in Brooklyn) but offered relatively few healthy options. For example, leafy green vegetables could only be found in 2 to 4 percent of bodegas in Harlem.⁵⁹ The initiative has implemented five campaigns or programs at the participating stores: Mooove to 1% Milk, Move to Fresh Fruits and Vegetables, Star Bodegas, Adopt –a-Bodega, and Farm-to-Bodega—all of which have met with relatively positive results. The 1% Milk campaign started with 15 bodegas and expanded to over 1,000, with 45 percent of stores reporting an increase in low-fat milk sales and 70 percent reporting an increase in demand for low-fat milk. Similarly, with the Move to Fresh Fruits and Vegetables campaign, 32 and 26 percent of stores respectively reported increased sales of fruits and vegetables. Among the initial 55 bodegas that met the Star Bodega standards, 78 percent reported increased sales of healthier foods.⁶⁰

Buying Food Locally

When residents shop for produce, whole grains, dairy, and other healthy options closer to home instead of traveling outside of the community for these items dollars that would otherwise be spent elsewhere are captured locally.⁶¹ Many food retailers have successfully utilized “buy local” campaigns to increase sales of local produce, meat, and dairy products and capture local dollars within the community. For example, Iowa State University research showed that if that region’s consumers ate five locally-grown fruits and vegetables each day for only the three months when those fruits and vegetables are in season, it would create \$6.3 million in labor income, and 475 new jobs within the locale.⁶² These campaigns can take two forms (or a combination of both)—purchasing locally grown and raised produce, meat, or dairy products; and/or shopping at local retailers. Since stocking healthy items from major distributors may be impractical for smaller stores (due to minimum purchase requirements), sourcing these products from local farmers who can accommodate smaller orders presents a more viable option for corner stores and other small retailers including local restaurants, while also increasing revenues for local farmers—up to 82 cents on the dollar that would otherwise go to middlemen in the distribution chain.⁶³ In fact, the local food industry commands substantial local revenue generating power—upward of \$4.8 billion.⁶⁴

Even if the healthy products sold in small local stores aren’t sourced locally, purchasing from these stores still creates local economic stimulus. In Howard, South Dakota, a broad-reaching buy-local campaign (which included all local retailers, not just food outlets) resulted in an overwhelming increase in local retail sales. Between 1960 and 1999, Howard, South Dakota, lost nearly 100 local businesses. Supported by \$150,000 from the Program for Rural School and Community Renewal at South Dakota State University (funding provided by the Annenberg Rural Challenge), teachers and students at Howard High began a “community cash flow study” in order to better understand the local distress. They learned that local residents were frequently traveling 30 miles away to do their shopping; but when money was spent locally, it changed hands in town eight times. Students started asking residents if they could spend just 10 percent more at home, as well as working with local businesses to improve customer services. After just the first year of their efforts, local retail sales increased 41 percent. This impressive turnaround prompted extended efforts to further bolster community revitalization—ultimately leading to a 10- year redevelopment plan that garnered federal accolades for smart growth and sustainability.⁶⁵

Urban Agriculture

Farming inside city limits is not a new concept, but a vibrant movement across the country is revitalizing this age-old practice—improving both the health and economic vitality of communities. Urban farms that package

and process foods in addition to cultivating them are typically able to create a considerable number of jobs; and many urban agriculture projects also provide basic job skills training—a particularly important strategy for bringing some of the hardest-to-employ groups, including the formerly incarcerated, into the labor force. Communities of color are significantly affected by the loss of economic productivity associated with disproportionate incarceration rates—especially boys and men of color. In some states, the estimated lost economic productivity due to incarceration within the African American community can exceed one billion dollars.⁶⁶ Urban agriculture—as a strategy to prevent recidivism—therefore contributes to economic development specifically in communities most impacted by high rates of incarceration. Certainly urban agriculture should not be viewed as the panacea of reentry strategies, and not all operations even include this type of focus; but some initiatives have been able to target their programs to specifically assist people who are at an even greater disadvantage in securing employment.

Growing Home in Chicago has trained approximately 150 formerly incarcerated individuals on its farms in and around the city since the program began in 2002. As of 2010, according to the organization, 59 percent of its participants had been homeless and 76 percent had previously been incarcerated. Of those who had been incarcerated, 95 percent did not return to jail, compared to the average recidivism rate in Illinois of 50 percent. Ninety percent of Growing Home’s formerly incarcerated or homeless participants successfully rent their own apartments or find stable housing, and over two-thirds secure either full-time jobs or further job training after graduating.

Additionally, the savings urban farming families generate by nearly fully supplementing their own produce needs are more substantial than might first be assumed. A recent Michigan State University study indicated that the combination of a variety of urban agriculture strategies could supply local residents with more than 75 percent of their vegetables and over 40 percent of their fruits.⁶⁷ Other community benefits from urban agriculture that may not be as readily apparent include cityscape improvements such as providing safe and attractive open spaces available for community gatherings, and recycling organic waste into compost—hence diverting food wastes from local retail, restaurants, and residents away from landfills. Some specific examples from the field highlight especially promising urban agriculture initiatives.

One such initiative that is currently under development in Cleveland, Ohio, is Green City Growers Cooperative—which will include a five-acre hydroponic greenhouse growing leafy greens and herbs that will be sold to grocery stores, institutions, and wholesale produce businesses. Green City Growers expects to provide 35–40 long-term, living-wage jobs for low-income residents living in the surrounding area; and as a social enterprise, it will allow workers to become owners, building about \$65,000 in capital accounts over eight years, in addition to good wages and affordable benefits. Green City Growers was able to finance its start-up partially through Brownfields Economic Development Initiative (BEDI) grants through the U.S. Office of Housing and Urban Development.⁶⁸ BEDI grant funds are primarily intended to support the redevelopment of brownfields sites in economic development projects with the goal of increasing economic opportunities for low- and moderate-income persons as part of the creation or retention of businesses, jobs, and increases in the local tax base. Although Green City Growers is still in the developmental phase, it is an effort of the Evergreen Co-operative Initiative—an endeavor aimed at closing the wealth gap by creating green, for-profit businesses that local residents own and operate—which has already demonstrated success through two other co-operatives it recently launched (the Evergreen Co-operative Laundry and Ohio Solar Co-operative).⁶⁹ More about Green City Growers and other examples from the field can be found in the PolicyLink report, *Growing Urban Agriculture: Equitable Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities*.

Community Gardens

Community gardens are a popular, high return-on-investment facet of urban agriculture. Ranging from small individual plots to small or medium school or neighborhood gardens, these gardens can grow produce for individual consumption or for market. Community gardens can serve as catalysts for entrepreneurship and community development—they require relatively low start-up costs yet generate economic opportunities in the form of income supplements, reduced family food costs, and revitalized neighborhoods.⁷⁰ Some cities have hundreds of community gardens, allowing residents to both increase earnings and decrease expenses by growing produce for sale and personal consumption—which effectively multiplies the fiscal benefits because residents have increased discretionary income to inject into the local economy.

Community gardens can transform vacant lots into significant economic generators—urban-market gardeners in Philadelphia earned up to \$68,000 in revenue per half acre, and researchers at Ohio State University’s Agricultural Research and Development Center estimate that community gardeners could gross up to \$90,000 per acre by selecting the right crops and growing techniques.⁷¹ They can also save families money by supplying some or all of gardening families’ produce needs. For example, City Slicker Farms in Oakland, California, surveyed its backyard garden participants and found that 92 percent of the participants saved money because of their garden, and 62 percent grew half or more of their families’ produce in their gardens. Studies have estimated that a community garden can yield around \$500 to \$2,000 worth of produce per family a year, and that every \$1 invested in a community garden plot yields around \$6 worth of produce.⁷²

Gardening and agriculture are important for maintaining cultural traditions, especially in Native American and immigrant communities. Community gardening can provide an opportunity for maintaining historical customs, reconnecting youth to their heritage, and generating income. Gardening and agriculture are keystones in the Santee Sioux heritage, and a new collaborative gardening project in Santee, Nebraska, will help reestablish this fading tradition as well as stimulate critical economic, social, and health benefits for community members who are experiencing high rates of obesity, diabetes, and unemployment.⁷³ Project components include assistance and training, farm-to-school, and entrepreneurship opportunities. This system builds the capacity of gardeners to earn a living and directly connects them with retail opportunities at schools and a weekly outdoor market. The market also serves as a venue for vendors selling crafts and other goods, and provides a critical community development launch pad by offering community members an accessible and inviting opportunity to earn supplemental income.

Another community garden achieving both economic and cultural gains is *Nuestras Raíces* (“Our Roots”) in Holyoke, Massachusetts. *Nuestras* currently manages nine community gardens and one youth garden, and helps the over 100 participating families rediscover their food culture by helping maintain the strong agricultural ties of the Puerto Rican immigrants who settled in Holyoke. In addition to the average of over \$1,000 worth of produce that families produce annually, the gardening program also serves to develop general business skills.⁷⁴ Beginning farmers go through an eight-week training to write a business plan before they rent plots. Youth can farm rent-free, and there is a designated youth farm and a program for youth to learn farming techniques from the elder Puerto Rican volunteers. *Nuestras* provides the *La Finca* farmers with small loans, trainings, shared resources, and marketing assistance, and then helps gardeners find land and capital to open their own farms.⁷⁵ To date, *Nuestras Raíces* has assisted with the creation of some two dozen food and agriculture businesses estimated to have added an annual \$2 million of economic activity to southern Holyoke. The gardening project not only directly generates healthy food and increased revenues, but prepares participants for even broader economic participation through green jobs training, environmental education, entrepreneurship, youth development, and leadership development.

Farmers' Markets

Farmers' markets are also an excellent "buy local" strategy since by their nature they create venues for farmers to sell locally grown food directly to consumers. In a previous section, the benefits of buying healthy foods from local corner stores were described. There are also added benefits of buying local foods directly from local farmers. A study in Michigan predicted significant economic stimulus from increasing purchasing of locally grown and raised food at farmers' markets. Based on the projections of a new economic modeling tool, which takes into account the jobs farms would help generate across their communities by spending and investing their net incomes, it was estimated that tripling the amount of fresh produce that farmers sell directly to consumers could generate as many as 1,889 new jobs and \$187 million in additional personal income.⁷⁶ Farmers' markets can serve to help build personal or family wealth by creating entrepreneurial opportunities for residents to sell their goods in a setting that requires very low start-up capital and can serve as a pathway to upward mobility.⁷⁷ Communities also reap economic benefits from the presence of local small farms because farmers reinvest their money into local economies by purchasing feed, seed, and other materials from local businesses.⁷⁸ In recent years there has been an explosion of interest in farmers' markets across the country. The USDA Farmers Market Promotion Program—which offers grants to help improve and expand farmers' markets and other direct producer-to-consumer market opportunities—is consistently oversubscribed, and the Senate Agriculture Committee's version of the 2012 Farm Bill proposed doubling support for the program given the need and enormous public demand for markets.

Farmers' markets can further realize economic gain by accepting SNAP, WIC, and other supplemental nutrition coupons and vouchers that allow low-income consumers to increase their purchasing power. The initial switch to utilizing SNAP through Electronic Benefits Transfers (EBT) created significant cost and technology hurdles. However, the USDA and a number of nonprofit and community-based organizations offer funding and training to address these challenges, and data show that the percent of transactions from EBT at farmers' markets doubled—from seven to 14 percent—between 2005 and 2009.⁷⁹ Additionally, there is overwhelming public support for these types of strategies that make produce more affordable and accessible to all Americans. A recent survey commissioned by the W.K. Kellogg Foundation found that three-quarters of Americans support a nationwide program to double the value of SNAP benefits when used at farmers' markets.⁸⁰

Although rates of SNAP redemption are relatively low at farmers' markets nationwide, redemption rates at farmers' markets in Rhode Island are nearly four times the national average—representing an average of \$143 in annual farmers' markets purchases per Rhode Island SNAP consumer.⁸¹ The vast majority of the customers who visit the Broad Street Farmers' Market in Providence, Rhode Island, every Saturday are low-income residents who depend on WIC, seniors' vouchers, and SNAP to meet their food needs. Before Broad Street opened more than six years ago, neighborhood residents had only limited and expensive options for purchasing fruits and vegetables, and especially had difficulty finding foods that reflected their cultural traditions. Because of the market, the neighborhood has the third highest redemption of WIC vouchers in the state. In the summer of 2007, 75 percent of Broad Street's sales came from WIC. Now, the market is focused on increasing the number of EBT customers, thanks to a recent grant that provided the funds to buy an EBT machine. To further increase their business, market staff members are offering nutrition classes and cookbooks to promote healthy food preparation and to encourage customers to return to the market.⁸²

In 2009, the Fair Food Network began a pilot project called Double Up Food Bucks in five Detroit farmers' markets with the goals of increasing access to and affordability of healthy foods for low-income families, while simultaneously creating new sales opportunities for Michigan farmers. The initiative matches SNAP food assistance benefits spent at participating farmers' markets dollar for dollar, up to \$20. In 2010, the initiative officially launched at the original five markets and quickly expanded to three new markets. Between August

and October of 2010, Detroit Eastern Market experienced a 368 percent increase in food assistance buying power compared to the same period of 2009. Across all participating markets, a total of \$203,451 in SNAP and Double Up Food Bucks tokens were redeemed during this period, with the money going directly in the pockets of Michigan growers and food businesses. The initiative had already grown to include 40 markets in the 2011 market season, and is expected to continue to grow in the coming years.⁸³ Detroit is not alone in offering these types of incentives. Wholesome Wave—a national nonprofit dedicated to supporting small and midsize farms, and making fresh, healthy, locally grown fruits and vegetables available to all people, regardless of income—has expanded their Double Value Coupon Program to nearly 300 markets in 25 states and the District of Columbia.⁸⁴

Impacts of Federal Nutrition Support on Local Economies

The participants in the Supplemental Nutrition Assistance Program (SNAP) and The Special Supplemental Nutrition Assistance Program for Women Infants and Children (WIC) are not the only ones who benefit from these programs. SNAP and WIC bring federal dollars into communities, produce specific economic benefits for individual stores, and bring broader economic stimulus across states, regions, and the nation. Every five dollars in new SNAP benefits generates nine dollars in total community spending.⁸⁵ Additionally, on average, \$1 billion of SNAP benefits generates anywhere from 8,900 to 17,900 full-time-equivalent jobs.⁸⁶ In 2010, over \$64 billion in SNAP benefits were redeemed at supermarkets, grocery stores, corner stores, farmers' markets, and other food retail outlets.⁸⁷ The availability of EBT infrastructure coupled with targeted outreach and education can serve to significantly increase SNAP redemption. In Rhode Island-based Greenmarkets, EBT expansion at farmers' markets from three markets in 2005 to 40 markets in 2010 resulted in an increase in SNAP sales from \$1,000 to over \$500,000 in a five-year period.⁸⁸

The WIC program also generates substantial economic benefits. In 2008, retail sales of food in the WIC packages were estimated to be \$4.6 billion after rebates; of this, farmers received nearly \$1.3 billion from the sale of commodities used in the production of the WIC packages.⁸⁹ WIC retail food sales production is also associated with an estimated 10,155 full-time-equivalent farm jobs.⁹⁰ Since WIC packages include foods that families are likely to purchase even in the absence of the program, the actual net gain that can be attributed to the program is much less—in 2008 it was estimated to be closer to \$331 million in sales and 2,640 jobs. WIC, however, is still a significant economic driver, especially in rural communities where these benefits are important to both the health and economic vitality of rural Americans, who are more likely to participate in federal nutrition programs.^{91,92}

Regional Economies of Scale

Considering how food access is tied to regional economic development allows for recognition of the role metropolitan development patterns play in either exacerbating or alleviating racial and economic disparities in income, wealth, health, and opportunity.

Food Hubs

Recently, regional food hubs have garnered attention as a key mechanism supporting the economic sustainability of small to medium-size local farms by providing centralized coordination of supply chain logistics such as aggregation, distribution, and marketing services.⁹³ These services are critical for smaller-scale operations that cannot afford to operate on their own and may be limited by other resources such as refrigerated delivery trucks or knowing where to advertise and sell to potential customers. By coordinating both supply chain and buyer logistics, food hubs not only create and retain jobs (packaging and handling, delivery, farmers) but also generate regional economic revenue by increasing the capacity of local farms to reach a wider customer base. Communities benefit from increased access to fresh, healthy, locally sourced

foods, job opportunities, and reduced pollution and fuel dependence from more efficient transportation routes.

There are currently 177 known food hubs in the country, and continued rapid growth is expected.⁹⁴ Although several food hubs are still ramping up, in general they have already shown immense potential for driving economic growth. In 2011, each food hub grossed nearly \$1 million in annual sales on average, with many showing double- and even triple-digit annual sales growth.⁹⁵ An Illinois report recently predicted that increasing consumption of Illinois-grown foods to 10 percent of the statewide total by 2020 and to 20 percent by 2030, would generate \$20 to \$30 billion in economic activity and thousands of new jobs in farming and the food industry each year.⁹⁶ Another study in Iowa found a similar potential regional economic impact of increasing fresh fruit and vegetable production to meet local and regional demand in a 10-county region—almost \$5 million in direct farm-level and retail sales, \$1.75 million in labor income, and 29 more jobs for the region.⁹⁷

To demonstrate the powerful economic impacts of food hubs, a study of the 16-county Northeast Ohio region found that a 25 percent shift in local food production toward meeting local demand for food could create 27,664 new jobs, provide work for about one in eight unemployed residents, increase annual regional output by \$4.2 billion, and expand state and local tax collections by \$126 million.⁹⁸ In Wisconsin, a food hub feasibility study estimated that a food hub operating at full capacity could create 400 jobs and inject an additional \$60 million into the local economy.⁹⁹

Food hubs facilitate local food production, distribution, and consumption, which strengthen local and regional economies. In King County, Washington, a 20 percent shift toward local food spending was predicted to increase annual income by half a billion dollars locally, and nearly a billion in the broader region.¹⁰⁰ The same shift in Detroit was projected to garner a similar increase: half a billion dollars in annual output, along with 4,700 new jobs, \$125 million in increased earnings, and a nearly \$20 million increase in tax revenues each year.¹⁰¹

Food hubs can also provide economic benefits by reinvesting in the local community. Charlottesville Local Food Hub (LFH), a nonprofit model founded in 2009 with current profits of over \$2 million, provides services for over 60 farms and has over 100 clients, including restaurants, grocery stores, senior centers, schools, and hospitals. LFH services assist in retaining more than 200 agricultural jobs. One of the participating farms, Partner Producers, reports that working with LFH led to an average 20 percent increase in sales, and 60 percent of participating farms now plan to increase food production. LFH also reinvested \$600,000 in the local farming economy through equipment purchasing. In addition to these direct economic benefits, LFH aids in community development by partnering with hospitals, schools, and clubs to bring weekly food markets to low-income communities, providing a summer food program for youth, and donating to food banks. By involving youth in many of these efforts, LFH is also providing important job skills—preparing these youth to enter the workforce and increasing their potential to secure future earnings.^{102, 103}

Common Market in the Delaware Valley is another food hub that is reaping economic rewards for local farmers and residents—including low-income people. Common Market connects wholesale customers to farmers in New Jersey, Pennsylvania, and Delaware by aggregating food in their warehouse from about 100 regional producers and marketing and distributing locally grown fresh food to schools, hospitals, grocers, and workplaces. Through the economies of scale that Common Market can reach, it can lower the retail value of food for low-income consumers. Yet because the supply system is shortened in this regional model, transaction costs are lowered and farmers are still able to earn a reasonable income from the sale of their produce. In their first year, Common Market sold over \$100,000 worth of food, and they were on track to do over \$1 million in business in 2012.

Food hubs are gaining popularity across the country and are garnering attention from a variety of funding sources to help initiate start-up. For example, both the federal Healthy Food Financing Initiative and the national Convergence Partnership Innovation Fund¹⁰⁴ have provided funding that has been leveraged to create the Northside Community Food Hub in Spartanburg, South Carolina. The hub is expected to create 23 new jobs—most of which will come directly from the Northside community, where nearly 64 percent of residents live below 200 percent of the federal poverty level.

Moreover, the regional coordination of food hubs results in a decrease in the number of miles that food travels from farm to table, thereby lowering transportation and oil consumption, which not only has environmental benefits, but has very real financial effects as well—as of 2008, 17 percent of all the energy used in the United States was devoted to our food supply, costing America \$139 billion.¹⁰⁵ Saving on transportation costs translates into dollars that can be allocated toward funding new innovative projects or existing safety net services.

It is worth noting that food hubs are a relatively new strategy developed specifically to benefit small and mid-sized producers. The primary requirement to be considered a food hub is the centralized coordination of supply chain logistics. Therefore, the economic impact of each hub varies significantly based on the size of the hub operation. This makes it difficult to provide uniform economic impact projections for hubs at a general level, necessitating assessment of each hub at an individual level. Furthermore, much of the current economic impact data for food hubs is based on forecasting models; the feasibility for a food hub to operate at the capacities predicted in these models remains to be seen, and heightens the importance of evaluating the actual economic impacts on these endeavors as they emerge. Despite these caveats, food hubs will likely prove to be especially important economic stimulants for smaller family farming operations in both rural and urban communities.

Transportation Systems

Agriculture/food systems and transportation systems are inextricably linked—food must be transported to retail outlets, consumers also need transportation systems to access food retailers, and food wastes must be transported out of communities after consumption. However, policies regulating the two systems often do not work in concert, and neither system typically does an adequate job of serving people who live in low-income households.¹⁰⁶

Because modern-day agriculture and transportation are highly energy intensive, when energy costs go up, food costs rise in a correspondingly dramatic fashion.¹⁰⁷ The farther away food is sourced, the greater the potential for its contribution to negative health and economic impacts. Longer trips and sometimes multiple modes of transportation are necessary to import foods from distant markets, which lead to increased fuel costs and worsened air pollution and greenhouse gas emissions.¹⁰⁸ Long distance imports can also edge smaller-scale farmers out of local market access.¹⁰⁹ More regionalized food and transportation systems can decrease these negative environmental, health, and economic impacts.¹¹⁰ Regions with more equitable transportation systems are also regions that are more economically competitive.¹¹¹ Targeted transportation investments can promote economic opportunity by improving linkages between housing, employment, retail, and social services; creating workforce strategies to ensure projects in the transportation sector are available for women and minority contractors; and encouraging affordable, high-density, mixed-use transit-oriented development.¹¹² Strategies to regionalize the food system—including those described in this paper—can realize the economic benefits from both improved healthy food access and more efficient and effective transportation systems. While a shift toward sustainability and more local production could mean some gradual employment dislocation in the older forms of agribusiness and freight transportation, the long-term

economic and health advantages to communities appear to be worth the investment in the new forms of growing and distributing food.

Recommendations

Food retail is a multibillion dollar industry in the United States, and no matter how large, if not multinational, its corporations or systems of production and distribution may have become, many of the impacts of retailing and consumer spending are inevitably local. Indeed, two main trends that hold the promise of growth in positive community-level economic impacts emerged in this paper: recreating viable markets and healthier options in communities that have been left behind, and incentivizing greater local production and sustainability. Researchers and advocates can do more to bring awareness and recognition of the significant economic driver that healthy food retail can be for all communities—and especially those that lack access. In this period of innovation and experimentation, research can also provide an evidence base which can guide the design of programs. It will be critically important to evaluate the strategies associated with healthy food access to see the ways and the extent to which they bring added economic value to families and communities. The following recommendations reflect opportunities associated with understanding, promoting, and advancing the economic benefits of improved healthy food retail.

Broaden research about healthy food access to include economic benefits in addition to nutritional improvements. This paper has highlighted some compelling statistics and research regarding how improving healthy food access contributes to economic and community development. In general, however, the existing body of research about healthy food access has focused more on the nutritional consequences. Highlighting the economic impact of improved healthy food retail will showcase the broader impacts for neighborhood vitality, and may appeal to a broader spectrum of vested interests and garner wider support for improving local food environments.

As research on healthy eating takes on a more sustained and direct focus on issues of economic impact, it should take advantage of the current period of widespread and diverse innovations. Questions of “whether” or “why” better access to healthy foods would be a useful policy goal—beyond implications for health outcomes—can be answered by documentation and analysis of the local economic consequences of the efforts underway to promote access to healthy food. Additionally, many of the job creation numbers reported for the strategies described in this paper may actually represent substitutions, when viewed in the national perspective, rather than a net increase since more local production may result in less production and distribution from more distant locations.¹¹³ Further research should attempt to discern between economic stimulus versus substitution at the local, state, and national levels.

All of the healthy food access initiatives described in this paper have the potential to provide real health and economic benefits for communities that need them the most. However, absent the intentional inclusion of low-income people and communities of color in urban and rural areas, they could miss the mark. Initiatives should be designed with the input and inclusion of local voices and leadership, and evaluation should specifically monitor the outcomes for communities most in need. The federal and state initiatives described here offer tremendous opportunities for learning how projects and programs are operating and how they can be made as effective as possible, as well as for bringing this information to a broader audience. Individual and comparative case studies will be needed in order to appreciate the varied tactics and contexts in different communities, and data systems created about the new programs could be used to answer important questions about the economic viability of retailers, the benefits to consumers, and the direct and indirect consequences for neighborhoods.

Document and evaluate the implementation of the Healthy Food Financing Initiative and similar models at federal, state, and municipal levels. If the HFFI is included in the federal Farm Bill it may significantly strengthen nationwide efforts to remove barriers to having fresh and healthy foods available—particularly in low-income communities and communities of color. A number of states and some municipalities (such as New Orleans) have taken steps to replicate this model in order to help revitalize their communities by bringing in new, vibrant, healthy food retail and creating and preserving quality jobs for local residents. Most of the state programs—with the exception of California—are closely modeled after the Pennsylvania Fresh Food Financing Initiative; however, the federal programs are structured quite differently. These nuances present the opportunity to document the variations of the model and the contexts in which they are best suited. Opportunities will soon exist to compare programs and retailers that receive public funds with those that operate on philanthropic and private funding alone, as well as comparing financing and incentive programs, to determine if there are differences in approach and impact. Once programs are fully operational, their various components should be carefully documented through establishment of a rigorous database about the experiences of grantees and loan or tax credit recipients.

Track economic impacts of SNAP and WIC benefit redemption. These programs provide critical benefits to all community members—not just those enrolled in the program. Food retail outlets operate on a very small margin.¹¹⁴ The billions of federal dollars that flow into communities through SNAP and WIC help sustain their operations and create multiplier effects in communities of all income levels across the country.¹¹⁵ For farmers' markets specifically, the USDA offers supplemental funds to provide free wireless EBT equipment and services, waive transaction fees, train workers to use the equipment, and promote the markets to SNAP recipients. The proliferation of these supports for small retailers should be tracked for their effect on the volume of sales and the efficiency of the operations.

Expand and document outcomes of initiatives that increase the spending power of low-income consumers to purchase healthy foods. Vouchers and other programs that increase the amount of money low-income families have to purchase healthy food provide economic benefit both for the families receiving assistance as well as the farmers and other retailers selling the foods, and ultimately for the entire community through multiplier effects. Documenting the outcomes of these initiatives can provide valuable information for replication of successful initiatives and build the case for dedicating additional funding to these types of efforts.

Learn from and replicate programs that provide job skills training and leadership development. A number of examples were provided in this report illustrating how urban agriculture, community gardening, and other healthy food access strategies incorporate employment opportunities, job training, and youth leadership development—experience and skills that transfer into increased economic productivity in other venues as well. Evidence of the employment outcomes of these social enterprises can inform the crafting of future programs. Many of the supermarket firms that have created new stores in low-income neighborhoods have made agreements with unions to get local residents into the company, and incentives for those types of practices should be broadly applied.

Encourage greater collaboration among local entities in understanding the possibilities of innovative food retail models to serve as economic development strategies. Local economic development agencies, workforce investment boards, community colleges, public health departments, and planning agencies should develop healthy food system plans that encourage economic development, job creation, and creative land use and redevelopment.

Further explore savings generated by local food production as it relates to transportation costs. This paper touched on the environmental and financial benefits of decreasing fuel dependence through decreased miles traveled in regional food economies, but significantly more attention should be paid to the economic impact of changes in transportation patterns due to food system shifts toward local or regional production, distribution, and purchasing—including all forms of transportation (automobile, transit, and pedestrian). For example, additional studies could be done about the economic impacts associated with increased foot traffic from stores or farmers' markets.

Conclusion

For decades, both economic and social barriers to entry have prevented many healthy food retailers from entering the underserved communities that are most in need of the related economic impact that retailers bring. However, the tide is starting to turn as programs offering fresh food retail incentives (like healthy food financing initiatives), fresh food purchasing incentives (like the Double Up Food Bucks program), fresh food production incentives (like food hubs) and a host of other strategies, are providing the encouragement needed to overcome some of these historical barriers. Additionally, often these initiatives demonstrate positive economic impacts with just a small amount of initial seed capital. More established larger-scale enterprises have even proven to be profitable. For example, Jeff Brown, owner of the 10-store ShopRite regional supermarket chain based in Philadelphia, and one of the first recipients of financing through the Pennsylvania Fresh Food Financing Initiative, is recognizing the profitability of his stores—located in underinvested low-income communities and communities of color.¹¹⁶

Increasing access to healthy food is not just a means for reaching improved health outcomes. Equally as important are the accompanying economic benefits—ranging from new jobs, wages, and tax revenues, to stimulating local economic activity and social cohesion in neighborhoods. The strategies highlighted in this paper have the potential to provide significant economic stimulus and community development, especially important during economic downturns. At a time when the country is barely out of a recession and when millions of people are still struggling to make ends meet, healthy food access is—and should continue to be—part of a variety of tactics for boosting economic and community vitality. Policy advocacy campaigns and research should focus on both the health and economic outcomes through the perspective of an equity framework.

Citations

¹ Taggart, M., of The Ohio State University Cuyahoga County extension service, as quoted by Sterpka, Marty in "Cleveland's For-profit Urban Farms Are Growing." *Cleveland Blog*. July 6, 2009, http://blog.cleveland.com/metro/2009/07/clevelands_forprofit_urban_gar.html.

² The Reinvestment Fund. "Access to Supermarkets in Inner-City Communities." *Reinvestment Brief*, Issue 5. 2008, <http://www.trfund.com/resource/downloads/policypubs/CDFIStudySummary.pdf>.

³ Krouse, L. and Galluzzo, T. "Iowa's Local Food Systems: A Place to Grow." *The Iowa Policy Project*, 2007, <http://www.iowapolicyproject.org/2007docs/070206-LocalFood.pdf>.

⁴ Byrt, F. "Six Retailers Battling for Americans' Grocery Money." *The Street*, April 5, 2012, <http://money.msn.com/top-stocks/post.aspx?post=9f5b5cdc-6e45-4618-aaee-1294c63dbf0b>.

⁵ Eisenhauer, E. "In Poor Health: Supermarket Redlining and Urban Nutrition." *GeoJournal*, 2001, 53(2): 124-133.

⁶ Ibid.

⁷ Pothukuchi, K. "Attracting Supermarkets to Inner-City Neighborhoods: Economic Development Outside the Box." *Economic Development Quarterly*, 2005. 19(3): 232-244.

-
- ⁸ “Introducing... The California FreshWorks Fund!” NCB Capital Impact Press Release, July 20, 2011, <http://www.ncbcapitalimpact.org/default.aspx?id=2140>.
- ⁹ Karp, R. “Toward an Associative Economy in the Sustainable Food and Farming Movement.” *An Essay*, 2007.
- ¹⁰ Treuhaft, S. and Karpyn, A. *The Grocery Gap*. Oakland, CA: PolicyLink, 2010.
- ¹¹ Saelens, L.D., Sallis, J.F., Frank, L.D., Couch, S.C. et al. “Obesogenic Neighborhood Environments, Child and Parent Obesity: The Neighborhood Impact on Kids Study.” *American Journal of Preventive Medicine*, 2012, 42(5): e47-e55.
- ¹² Morland, K., Diez Roux, A.V., & Wing, S. Supermarkets, Other Food Stores, and Obesity: The Atherosclerosis Risk in Communities Study. *American Journal of Preventive Medicine*, 2006, 30(4):333-9.
- ¹³ Babey, S.H., Diamant, A.L., Hastert, T.A., Harvey, S. et al. *Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes*. Oakland, CA and Los Angeles: California Center for Public Health Advocacy, PolicyLink, and the UCLA Center for Health Policy Research, 2008.
- ¹⁴ Gallagher, M. *Examining the Impact of Food Deserts on Public Health in Chicago*. Chicago: Mari Gallagher Research and Consulting Group, 2006.
- ¹⁵ Gallagher, M. *The Chicago Food Desert Report*. Chicago: Mari Gallagher Research and Consulting Group, 2009.
- ¹⁶ Giang, T. Karpyn, A. Laurison, H., Hillier, A. et al. “Closing the Grocery Gap in Underserved Communities: The Creation fo the Pennsylvania Fresh Food Financing Initiative.” *Journal of Public Health Management and Practice*, 2008, 14(3): 272-279.
- ¹⁷ Inagami, S., Cohen, D., Finch, K.B., and Asch, S. “You Are Where you Shop: Grocery Store Locations, Weight, and Neighborhoods.” *American Journal of Preventive Medicine*, 2006, 31(1): 10-17.
- ¹⁸ Powell, L., Auld, C., Chaloupka, F., O’Malley, P.M. and Johnston, L.D. “Associations Between Access to Food Stores and Adolescent Body Mass Index.” *American Journal of Preventive Medicine*, 2007, 33(4).
- ¹⁹ Rundle, A., Neckerman, K., Freeman, L., Lovasi, G., et al. “Neighborhood Food Environment and Walkability Predict Obesity in New York City.” *Environmental Health Perspectives*, 2009, 117, 442-447.
- ²⁰ Chen, S., Raymond, F., & Snyder, S. “Obesity in Urban Food Markets: Evidence from Georeferenced Micro Data.” Selected paper prepared for presentation at the Agricultural & Applied Economics Association, 2009 AAEA & ACCI Joint Annual Meeting, 2009, <http://ageconsearch.umn.edu/bitstream/49512/2/49512.pdf>.
- ²¹ Liu, G., Wilson, J., Qi, R., and Ying, J. “Green Neighborhoods, Food Retail, and Childhood Overweight: Difference by Population Density.” *American Journal of Health Promotion*, 2007, 21(4): 317-325.
- ²² Morland, K., & Evenson, K. “Obesity Prevalence and the Local Food Environment.” *Health & Place*, 2009, 15(2): 491-495.
- ²³ Chen, S., Florax, R.J., Snyder, S., and Millder, C.C. “Obesity and Access to Chain Grocers.” *Journal of Economic Geography*, 2010, 86: 431-452.
- ²⁴ Powell, L.M., Hann, E., and Chaloupka, F.J. “Economic Contextual Factors, Food Consumption, and Obesity Among U.S. Adolescents.” *Journal of Nutrition*, 2010, 140(6): 1175-1180.
- ²⁵ Black, J.L., Macinko, J., Dixon, L.B., and Fryer, G.E. “Neighborhoods and Obesity in New York City.” *Health and Place*, 2010, 16(3):489-99.
- ²⁶ Rahman, T., Cushing, R., and Jackson, R. “Contributions of Built Environmnet to Childhood Obesity.” *Mt. Sinai Journal of Medicine*, 2011, 78(1):49-57.
- ²⁷ *Searching for Markets: The Geography of Inequitable Access to Healthy and Affordable Food in the United States*. Philadelphia: The Reinvestment Fund and Opportunity Finance Network, 2012.
- ²⁸ PolicyLink, The Food Trust, and The Reinvestment Fund. Fact Sheet on State Programs. 2012.
- ²⁹ United States Department of Agriculture. Creating Access to Healthy, Affordable Food. 2010, <http://apps.ams.usda.gov/fooddeserts/AccessHealthyFood.pdf>.
- ³⁰ Barnes Reports. Grocery Store Industry. 2012 Industry and Market Series.
- ³¹ Calvert Foundation. Invest in Healthy Foods for Low-Income Communities, http://www.calvertfoundation.org/index.php?option=com_content&view=article&id=200.
- ³² California FreshWorks Fund Fact Sheet, http://www.cafreshworks.com/pdfs/CFWF_FactSHT_9.pdf.
- ³³ Song, Y. and Sohn, J. “Valuing Spatial Accessibility to Retailing: A Case Study of the Single Family Housing Market in Hillsboro, Oregon.” *Journal of Retailing and Consumer Services*, 2007, 14:279-288.
- ³⁴ The Reinvestment Fund. “The Economic Impacts of Supermarkets on their Surrounding Communities.” *Reinvestment Brief*, Issue 4, 2006.

-
- ³⁵ Vermont Food Industry Economic Impact Study. Prepared for the Vermont Grocers' Association by John Dunham & Associates, 2011.
- ³⁶ Procter, D. "Rural Grocery Store as a Cornerstone Business." *The Rural Grocery Store Blog*, 2011.
- ³⁷ Gross, S.M. "Planting New Grocery Stores in Rural Food Deserts." *Kansas City Public Media – KCUR.org*. 2011, <http://kcur.org/post/planting-new-grocery-stores-rural-food-deserts>.
- ³⁸ The Reinvestment Fund and Pennsylvania Fresh Food Financing Initiative, 2010, http://www.trfund.com/resource/downloads/Fresh_Food_Financing_Initiative_Comprehensive.pdf.
- ³⁹ PolicyLink, The Food Trust, and The Reinvestment Fund. A Healthy Food Financing Initiative: An Innovative Approach to Improve Health and Spark Economic Development. Fact Sheet, http://www.policylink.org/atf/cf/%7B97c6d565-bb43-406d-a6d5-eca3bbf35af0%7D/HFFI_ADVOCACY3.PDF.
- ⁴⁰ U.S. Department of Agriculture. Healthy Food Financing Initiative Implementation Plan, 2010, <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5085689>.
- U.S. Department of Health & Human Services Office of Community Services. Healthy Food Financing Initiative, 2011, <http://www.acf.hhs.gov/programs/ocs/resource/healthy-food-financing-initiative-0>.
- U.S. Department of Treasury. Mobilizing Capital in Places that Need it Most. 2012, <http://www.treasury.gov/connect/blog/Pages/cdfi-announcements.aspx>.
- ⁴¹ U.S. Department of Health and Human Services. Obama Administration Details Healthy Food Financing Initiative. Press Release, 2010, <http://www.hhs.gov/news/press/2010pres/02/20100219a.html/>.
- ⁴² United States Department of Agriculture. Creating Access to Healthy, Affordable Food. Grant Opportunities, <http://apps.ams.usda.gov/fooddeserts/grantOpportunities.aspx>.
- ⁴³ www.cafreshworks.com.
- ⁴⁴ PolicyLink, The Food Trust, and The Reinvestment Fund. Fact Sheet on State Programs, 2012.
- ⁴⁵ *Searching for Markets: The Geography of Inequitable Access to Healthy and Affordable Food in the United States*. Philadelphia, The Reinvestment Fund and Opportunity Finance Network, 2012.
- ⁴⁶ Vermont Food Industry Economic Impact Study. Prepared for the Vermont Grocers' Association by John Dunham & Associates. 2011
- ⁴⁷ Ibid.
- ⁴⁸ *New Seasons Market Sustainability Report 2012: Growing Sustainably*, <http://www.newseasonsmarket.com/assets/files/2012-sustainability-report.pdf>.
- ⁴⁹ Williams, C. "New Seasons Hires Execs to Support Growth." *Sustainable Business Oregon*, August 6, 2012, <http://www.sustainablebusinessoregon.com/articles/2012/08/new-seasons-hires-execs-to-support.html>.
- ⁵⁰ Food Research and Action Center. *A Review of Strategies to Bolster SNAP's Role in Improving Nutrition as well as Food Security*, 2012.
- ⁵¹ National Association of Convenience Stores. Fact Sheets: U.S. Convenience Store Count, 2012.
- ⁵² Ibid.
- ⁵³ National Association of Convenience Stores. Fact Sheets: Convenience Stores Offer More Convenience, 2012.
- ⁵⁴ Ver Ploeg, M. Breneman, V. Farrigan, T., Hamrick, K. Hopkins, D. et al. *Access to Affordable and Nutritious Food – Measuring and Understanding Food Deserts and Their Consequences: Report to Congress*. USDA Economic Research Service, 2009.
- ⁵⁵ Procter, D.E. "Strengthening a Critical Rural Infrastructure: Rural Grocery Stores." A Presentation for the U.S. Department of Treasury CDFI Fund, 2012.
- ⁵⁶ Siedenburg, K. et al. *Healthy Corner Stores Q&A*. A report published by the Healthy Corner Stores Network, 2010.
- ⁵⁷ Ibid.
- ⁵⁸ Ibid.
- ⁵⁹ New York City Dept. of Health and Mental Hygiene, Center for Economic Opportunity. New York City Healthy Bodegas Initiative. *2010 Report*.
- ⁶⁰ Ibid.
- ⁶¹ The Food Trust. Healthy Corner Stores Issue Brief. Produced for the Healthy Corner Stores Network, Winter 2011.
- ⁶² Swenson, David. "Economic Impact Summaries" covering Black Hawk County region. March 2008. University of Northern Iowa Center for Energy and Environmental Education.
- ⁶³ LocalHarvest. "Why Buy Local," <http://www.localharvest.org/buylocal.jsp>.

-
- ⁶⁴ Low, S. and Vogel, S. "Direct and Intermediated Marketing of Local Foods in the United States." *Economic Research Report*, 2011. No. (ERR-128), pg 38.
- ⁶⁵ Ardery, J. "Youth-Powered Hopes Drive Howard Ahead." *Daily Yonder*, January 24, 2012, <http://www.dailyyonder.com/youth-driven-hopes-drive-howard-ahead/2012/01/19/3702>.
- ⁶⁶ Steward Research Group. Racial Disparities in the Texas Criminal Justice System, 2003.
- ⁶⁷ Colasanti, K.J.A. and Hamm, M.W. "Assessing the Local Food Supply Capacity of Detroit, Michigan." *Journal of Agriculture, Food Systems, and Community Development*, 2010. 1(2):41-58.
- ⁶⁸ PolicyLink. Urban Agriculture and Community Gardens Tool, <http://www.policylink.org/site/c.lkIXLbMNJrE/b.7634267/k.C841/Policy.htm>.
- ⁶⁹ <http://evergreencooperatives.com/business/evergreen-laundry/>;
<http://evergreencooperatives.com/business/evergreen-energy-solutions/>.
- ⁷⁰ American Community Gardening Association. "What Is a Community Garden?" <http://www.communitygarden.org/learn/>.
- ⁷¹ Taggart, M., of The Ohio State University Cuyahoga County extension service, as quoted by Sterpka, Marty in "Cleveland's For-profit Urban Farms Are Growing." *Cleveland Blog*. July 6, 2009, http://blog.cleveland.com/metro/2009/07/clevelands_forprofit_urban_gar.html.
- ⁷² PolicyLink. Urban Agriculture and Community Gardens Tool, <http://www.policylink.org/atf/cf/%7B97c6d565-bb43-406d-a6d5-eca3bbf35af0%7D/URBAN%20AGRICULTURE%20COMMUNITY%20GARDENS.PDF>.
- ⁷³ Radding, Amy. "Growing Fresh Produce, Fresh Opportunity." Center for Rural Affairs, <http://www.cfra.org/node/3861>.
- ⁷⁴ Nuestras Raíces. "Community Gardens," <http://www.nuestras-raices.org/communitygardens.html>.
- ⁷⁵ PolicyLink. Urban Agriculture and Community Gardens Tool: Case Studies, http://www.policylink.org/site/c.lkIXLbMNJrE/b.7634515/k.7B63/Case_Studies.htm.
- ⁷⁶ P. Cantrell, D. Conner, G. Erickcek, and M. W. Hamm, *Eat Fresh and Grow Jobs, Michigan*. Traverse City, MI: Michigan Land Use Institute (MLUI) and the CS Mott Group, Michigan State University, 2006, as cited in The Farm and Food Policy Project, 2007.
- ⁷⁷ The Ford Foundation, Project for Public Spaces, Inc., and Partners for Livable Communities, *Public Markets as a Vehicle for Social Integration and Upward Mobility, Phase I Report: An Overview of Existing Programs and Assessment of Opportunities*, New York: Project for Public Spaces, Inc. and Partners for Livable Communities, 2003, retrieved from http://www.pps.org/pdf/Ford_Report.pdf.
- ⁷⁸ Flora, J. L., Hodne, C.I J., Goudy, W., Osterberg, D., Klienbenstein, J., et al. "Social and Community Impacts," in Iowa Concentrated Animal Feeding Operations Air Quality Study: Final Report. Environmental Health Sciences Research Center, University of Iowa, pg. 148. 2003, http://www.ehsrsc.uiowa.edu/CAFOstudy/CAFO_7.pdf
- ⁷⁹ *Feasibility of Implementing Electronic Benefit Transfer Systems in Farmers' Markets*. Washington, DC: USDA, 2010.
- ⁸⁰ Poll: Americans Overwhelmingly Support Doubling Food Stamp Value at Farmers' Markets, 2012, www.foodandcommunity.org/conference.
- ⁸¹ Karp Resources. Rhode Island Food Assessment. A report prepared for the Rhode Island Food Policy Council. 2011.
- ⁸² PolicyLink. Farmers' Market Online Tool, http://www.policylink.org/site/c.lkIXLbMNJrE/b.7633859/k.7DOB/Case_Studies.htm.
- ⁸³ www.doubleupfoodbucks.org/about.
- ⁸⁴ <http://wholesomewave.org/dvcp/>.
- ⁸⁵ Hanson, K., and Golan, E. Effects of Changes in Food Stamp Expenditures Across the U.S. Economy. *USDA Economic Research Service Food Assistance and Nutrition Research Report*. 2002.
- ⁸⁶ Hanson, Kenneth. *The Food Assistance National Input-Output Multiplier (FANIOM) Model and Stimulus Effects of SNAP*. Washington, DC: U.S. Department of Agriculture, Economic Research Service, 2010.
- ⁸⁷ Food and Nutrition Service, Benefit Redemption Division, Annual Report FY2010, March 2011.
- ⁸⁸ Karp Resources. Rhode Island Food Assessment. A report prepared for the Rhode Island Food Policy Council. 2011.
- ⁸⁹ Hanson, K. and Oliveira, V. Economic Linkages between the WIC Program and the Farm Sector. USDA Economic Research Service, *Economic Brief No. 12*, 2009.
- ⁹⁰ Ibid.
- ⁹¹ Ibid.
- ⁹² Federal Nutrition Programs: Vital for the (Economic) Health of Rural America. Food Research and Action Center.

-
- ⁹³ United States Department of Agriculture. "Regional Food Hub Resource Guide." April 2012, <http://ngfn.org/resources/ngfn-database/knowledge/getfiFood%20hub%20resource%20guidele.pdf>.
- ⁹⁴ National Good Food Network. "US Food Hubs – Full List," <http://www.ngfn.org/resources/food-hubs/food-hubs#us-food-hubs>.
- ⁹⁵ United States Department of Agriculture. "Regional Food Hub Resource Guide." April 2012, <http://ngfn.org/resources/ngfn-database/knowledge/getfiFood%20hub%20resource%20guidele.pdf>.
- ⁹⁶ Freeman, Jim. "Local Food System has \$30B Economic Stimulus Potential for Illinois Economy." Illinois Department of Agriculture, 2009, <http://www.buylocalfoodinkitsap.org/illinois-report-data-confirms-local-food-is-economic-stimulus>.
- ⁹⁷ Starkweather, Kathie. *Regional Food Systems as Economic Opportunity*. Center for Rural Affairs, <http://www.cfra.org/node/3064>.
- ⁹⁸ Masi, B., Schaller, L., and Shuman, M. "The 25% Shift: The Benefits of Food Localization for Northeast Ohio & How to Realize Them." 2010, <http://www.neofoodweb.org/sites/default/files/resources/the25shift-foodlocalizationintheNEOregion.pdf>.
- ⁹⁹ United States Department of Agriculture. "Regional Food Hub Resource Guide." April 2012, <http://ngfn.org/resources/ngfn-database/knowledge/getfiFood%20hub%20resource%20guidele.pdf>.
- ¹⁰⁰ Viki Sonntag, "Why Local Linkages Matter: Findings from the Local Food Economy Study," Sustainable Seattle, April 2008, <http://sustainableseattle.org/Programs/localfoodeconomy>.
- ¹⁰¹ Michael Shuman, "Economic Impact of Localizing Detroit's Food System," Fair Food Foundation, <http://www.fairfoodnetwork.org/pdf/handout070617.pdf>.
- ¹⁰² United States Department of Agriculture. Food Hubs: Viable Regional Distribution Solutions. June 22, 2011, <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5091774>.
- ¹⁰³ Manly, Emily. Phone Interview. February 3, 2012.
- ¹⁰⁴ http://www.convergencepartnership.org/site/c.fhLOK6PELmF/b.6136267/k.80FB/Innovation_Fund_Initiative.htm.
- ¹⁰⁵ Ibid.
- ¹⁰⁶ Pothukuchi, K. & Wallace, R. "Sustainable Food Systems: Perspectives on Transportation Policy." In *Healthy, Equitable Transportation Policy: Recommendations and Research*. 2010.
- ¹⁰⁷ Heller, M.C., & Keoleian, G.A. *Life Cycle-Based Sustainability Indicators for Assessment of the U.S. Food System*. A Report by the University of Michigan Center for Sustainable Systems, 2002.
- ¹⁰⁸ Natural Resource Defense Council. "Food Miles: How Far Your Food Travels Has Serious Consequences for Your Health and the Climate." *Health Facts*. 2007.
- ¹⁰⁹ Pothukuchi, K. & Wallace, R. "Sustainable Food Systems: Perspectives on Transportation Policy." In *Healthy, Equitable Transportation Policy: Recommendations and Research*. 2010.
- ¹¹⁰ Anderson, M.D. The Case for Local and Regional Food Marketing. Issue Brief for Farm & Food Policy Project. 2007.
- ¹¹¹ PolicyLink. *Making Equity Central to Federal Transportation Policy*. Executive Summary. Oakland, CA: PolicyLink, 2009.
- ¹¹² Swanstrom, T. "Breaking Down Silos: Transportation, Economic Development, and Health." In *Healthy Equitable Transportation Policy: Recommendations and Research*. 2010.
- ¹¹³ Martinez, S., Hand, M., Da Pra, M., Pollack, S, Ralston, K. et al. "Local Food Systems Concepts, Impacts, and Issues." *USDA ERS Economic Research Report No. 97*, 2010.
- ¹¹⁴ *Understanding the Grocery Industry*. Philadelphia: The Reinvestment Fund. 2011.
- ¹¹⁵ The Basics: What You Need to Know. A *USDA Food and Nutrition Services Toolkit*. 2011.
- ¹¹⁶ Treuhft, S. "A Healthy (and Profitable) Oasis in Philly's Food Deserts." *Yes! Magazine*, 2012, <http://www.yesmagazine.org/new-economy/healthy-and-profitable-oasis-in-phillys-food-deserts>.



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