

Distribution and Setting of Farmers' Markets in the United States

by

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1. Introduction

The farmers' market, once a major element of food distribution in the early United States and worldwide, exists today in a variety of forms. This report traces the development and numbers of farmers' markets in the United States, examines the characteristics of farmers' markets, and examines the setting that the farmers' markets of today exist in. The report concludes with a summary and recommendations for market organizers, city planners and decision-makers regarding the establishment and guidance of farmers' markets.

1.1 Report Organization

This report is organized into five chapters. The first chapter is an introduction to the report and an explanation of methodology. The second chapter explains the definition, functioning, and prevalence today of farmers' markets. The third chapter discusses the value of farmers' markets from multiple perspectives. The fourth chapter discusses existing issues with farmers' markets. The fifth chapter discusses the analyzed dataset for its relation to the thematic discussion and existing issues with farmers' markets. The sixth and final chapter presents a summary and conclusions about the state of farmers' markets in the United States and best practices and resources for those with a stake in farmers' markets.

1.2 Methodology and Research Approach

Research was conducted based around five main questions related to the current state of farmers' markets in the United States. Research was conducted through a combination of current literature review from the United States and abroad and an analysis of farmers' market counts from the USDA's National Farmers Market Directory.

1. What is a farmers' market and how do they work?

This question is discussed in Chapter Two of this report. This question is primarily evaluated through review of current literature from the United States and elsewhere. In order to successfully demonstrate value, issues, and connections to the current state of farmers' markets, it is essential to clearly define a farmers' market and measures of success. Though it seems straight-forward, the very definition of a farmers' market is highly variable, depending on the perspective and objectives of the reviewer. With the concepts of current literature in mind, a definition of farmers' markets is proposed: a continuous, seasonal or temporary market at a fixed location made up of first-hand producers offering farm-fresh goods to the general public. With this definition in place, the remainder of Chapter Two aims to set the tone for the remaining research and data analysis.

2. What is the value of farmers' markets?

This question is addressed in Chapter Three of this report. Literature review is an essential tool to providing an answer to this question of adequate scope and accuracy. The results of such a study pull from a variety of sources, including some historical review, economic analysis, and looking at the issue from multiple perspectives. The end result is an answer to this question broken up by value and benefits according to sellers, buyers, and the community at-large.

3. What are existing issues connected to farmers' markets?

This question is addressed in Chapter Four and Chapter Five. Through the review of a wide range of current literature, Chapter Four identifies and examines issues with the establishment and the distribution of farmers' markets in the United States. Chapter Five draws on farmers' market counts retrieved from the USDA National Farmers' Market Directory retrieved in May of 2015. The research consists of analyzing counts and distribution by a variety of economic factors. This analysis results in findings about the economic setting common for farmers' markets.

4. What makes a farmers' market successful?

This question is addressed in Chapter Two and Chapter Three of this report, and indirectly in Chapter Six. Chapter Two specifically poses the question and provides criteria to analyze a

farmers' market against for success. In Chapter Three, the wide range of benefits of farmers' markets is laid out and connected to Chapter Two's discussion of measures of success. The value and success of farmers' markets is particularly addressed in the "Community Building" section of Chapter Three. Success is also used as a framework for examining farmers' market distribution and drawing up findings and recommendations in Chapter Six.

5. What is the role of market organizers and city planners in relation to successful farmers' markets?

This question is addressed in both Chapter Two and Chapter Six of this report. Chapter Two's section "Establishment and Functioning of Farmers' Markets" describes how city planners, market organizers and the public can be instrumental in the creation and continued success of farmers' markets in their cities. Chapter Six identifies simple approaches for these parties to take when looking to make an authentic and beneficial farmers' market in their city in an attempt to meet defined measures of success.

1.3 Limitations

The thematic discussion and data analysis in this report are limited by several factors. The reliability of farmers' market counts are the primary drawback for both types of research. This report places a great deal of dependence on the USDA National Farmers' Market Directory, in which the counts are based on a loosely-defined parameters of a farmers' market in an unregulated state. However, it should be noted that this record-keeping effort by the USDA is the most extensive and pervasive counting mechanism for farmers' markets in United States history, as historic counts are difficult to come by (Pyle 1971 and Brown 2001). The truth of the matter is that it is inherently difficult to record numbers of farmers' markets. Therefore, with caution, this report uses the USDA Directory data as representative of the state of farmers' markets in the U.S. for the purpose of evaluating geographic setting in relation to associated economic and demographic data.

On the Thematic Discussion

A primary issue with evaluating the presence and impacts of farmers' markets is that historic counts are not necessarily reliable. Count unreliability is described well by Brown in her 2001 article *Counting Farmers Markets* (Brown 2001, p.663):

Overall, reporting consistencies of at least seven types are common:

1. Markets considered farmers' markets in one classification system may not be included in another system.
2. Markets included in a listing may not be true farmers' markets (for example, a farm shop called 'Smiths's Farmers Market' rather than 'Smith's Farm Market').
3. Markets with multiple days of operation or at multiple locations may be listed as separate markets.
4. Markets located between two communities may be counted twice.
5. Local informants may not be completely knowledgeable.
6. Market counts may be conducted in different months (for example, preseason estimates may differ from midsummer counts).
7. Some markets refuse to be included on lists maintained by government agencies.

This list about count unreliability should be kept in mind throughout this report, as it accurately summarizes the concerns about reliability of both counts and analysis offered by the scholarly sources reviewed for this report and qualms about the data in the USDA National Farmers' Market Directory presented in this report.

Another basic limitation is that literary sources and datasets cannot completely describe the success of a farmers' market in themselves. Farmers' markets are about much more than checkboxes of whether organic produce is available or not. For example, the San Luis Obispo Farmers' Market has a variety of

stalls, including several with prepared foods that are by no means healthy or organic, and yet the atmosphere of the market is arguably very community-strengthening. This is a market that brings the often separate and incompatible publics of the City together: the long-time SLO residents together with the nearby Cal Poly students in a way that no other community event does. This is a prime example of how palpable civic atmosphere and contribution to community identity are certainly present, but a scholarly source or a data point cannot capture it. Therefore, the examination in this report is limited by an inability to actually visit all of the farmers' markets discussed in this report and speak to community members in the areas they affect.

On the Data and Analysis

Having a total of 8,352 farmers' market listings in 6,527 unique zip codes, this report assumes that the USDA National Farmers' Market Directory offers a sampling of existing farmers' markets in the United States and is representative of the whole (Agricultural Marketing Service 2015). However, the data analysis is, of course, limited by the completeness of the USDA raw data listings of farmers' markets. It is not expected that it accurately and completely lists all farmers' markets in the United States with their characteristics. This is because in order to be recorded in the dataset, a farmers' market manager voluntarily adds and edits information on their market on the USDA website (Agricultural Marketing Service 2015). Recording farmers' markets in the directory is not regulated, nor is the correctness of the information in the directory managed or enforced (Agricultural Marketing Service 2015).

However, the reliability of the counts are more trustworthy due to the acknowledgement of the incentive to register farmers' markets in the USDA National Farmers' Market Directory: it is also a consumer resource. Potential consumers on the site "...can search for markets by zip code, geographic proximity, product availability, payment method and even whether the market participates in Federal nutrition programs, such as the Supplemental Nutrition Assistance Program (SNAP)," (Agricultural Marketing Service 2015). This directory is beneficial for farmers' market managers to record with, because it could

potentially bring more consumers to their markets. In addition, the directory remains relevant because the data is updated regularly. Updates and revisions can be seen within two business days (Agricultural Marketing Service 2015).

The statewide examination in Section 5.3 of this report is also limited by the very use of states as the level of geographic analysis. States are not a particularly specific level of geography to use in the case of farmers' market prevalence and distribution due to the high number of people in a state, variations in city size and density, and fluctuations in culture and lifestyle across a single state. For example, Washington State has a population of 6,819,579 people, most of which live in or around Seattle, Washington (United States Census Bureau/American FactFinder 2009-2013). In the entire state, there are 171 recorded farmers' markets. Once divided into the east side of the state and the west side of the State by the Cascade Mountains, it is seen that 132 out of the total 171 markets (77%) are located on the west side, though it is geographically smaller. Additionally, the county Seattle is located in, King County, has 39 out of the 171 markets (23%), the same number as the entire east side of the State. In this way, Washington State is a good example of how comparing farmers' markets on a statewide basis may dramatically over- or underrepresent the prevalence of farmers' markets in specific cities or regions of states. Additionally, comparing states against each other is difficult because the states vary from each other by the same factors: population, demographics, and culture.

2. Overview of Farmers' Markets

Farmers' markets have experienced a recent renewal to relevance and popularity in American cities (Brown 2001). Although in many places in Europe and elsewhere abroad, there has been a continual presence of farmers' markets in both the urban and rural fabric, farmers' markets were long absent from the landscape of American cities and culture, and their numbers have fluctuated greatly in the past several centuries (Cameron 2007). This chapter will set the framework for the rest of this report: explaining the history and fluctuating counts of farmers' markets in the United States, describing what a farmers' market is and how it works, and concluding with the relevance of farmers' markets today.

2.1 History of Farmers' Markets

The early history of farmers' markets in the U.S. is described by Jane Pyle in her 1971 article *Farmers' Markets in the United States: Functional Anachronisms*. According to Pyle, the first market of record on American soil was established in the City of Boston in 1634 by English Colonial Governor John Winthrop. Pyle notes that sources indicate that there were a total of 20 markets in the colonies in 1700, distributed throughout New England, New York, New Jersey, and Pennsylvania, with one in the South. These early markets continued the European tradition, being established by political authority to supply urban populations with food. In many colonial towns, the marketplace was a central gathering place, in which farmers brought products to the city dwellers (Pyle 1971). In the 18th and 19th centuries, a common practice for the formation of farmers' markets was according to this procedure: "To initiate a beneficial system of food distribution, a prominent citizen often donated a tract of land with the deed specifying that it was to be used 'forever' as a market," (Pyle 1971, p.173). At this time, location and characteristics of the marketplace were potential points of contention among city dwellers due to market competition with permanent stores, aesthetics of the market, sanitation of the market, traffic congestion, or other concerns (Pyle 1971).

Pyle continues: “By the end of the nineteenth century almost half of the cities reporting indicated that no municipal or corporation markets were present. Their importance was beginning to decline in the urban areas of the New England States,” (Pyle 1971, p.176). The decline was noted elsewhere, including the Midwest and the West, especially in older cities. In these places, early markets had given way to the permanent private stores providing the urban food supply. While there were exceptions such as markets in the South, and in specific locations such as York, Pennsylvania, the pattern of declining importance of farmers’ markets dominated. This pattern coincided nearly completely with the improvement of transportation networks, city growth and agriculture specialization (Pyle 1971). As cities grew in this time, farmers’ markets were often replaced with permanent wholesalers and neighborhood grocery stores (Pyle 1971).

In 1918, the distribution of markets had not changed much from 1880 levels (Pyle 1971). Approximately half of the 240 census cities maintained municipal markets, with the majority of large cities reporting the presence of farmers’ markets. At this time, cities in the South, the Midwest, and the Far West often had markets, though the characteristics of markets varied significantly from one another. “The distribution in 1918 indicates that although the process of decline continued, the market remained as a source of fresh produce and in hard times could be reinstituted,” (Pyle 1971, p.180). At this time, the industrialized food system was well on its way to establishment, as wholesaling and vast distribution systems were strongly in-tact (Pyle 1971).

In the 1940s, farmers’ markets saw a brief time of expansion in the United States, so much so that the “...U.S. Department of Agriculture (USDA) researchers thought that rapid urbanization promised a rosy future for this venerable institution.” (Brown 2001, p.655). **Table 2.1** displays the total number of farmers’ markets in the United States in 1946, including its various permutations, by location in the United States. **Figure 2.1** displays the percentage of total farmers’ markets by region of the United States in 1946.

Table 2.1 Location and Total Counts of Farmers' Markets in the United States, 1946	
Location	Number of Farmers' Markets
Northeast	220
South	328
Central	152
West	24
Total	724

Note. From "Farmers' produce markets in the United States Part 1: History and Description" by J.L. Wann, et. Al, 1948, Washington, p. 12.

Figure 2.1 Percentage of Farmers' Markets Regionally, 1946

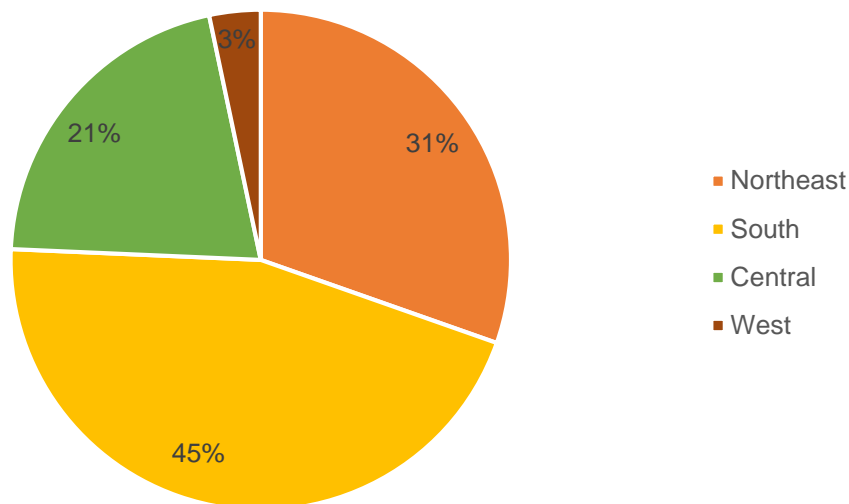


Figure 2.1 Percentage of Farmers Markets Regionally, 1946. Note. From "Farmers' produce markets in the United States Part 1: History and Description" by J.L. Wann, et. Al, 1948, Washington, p. 12.

Despite the prevalence of farmers' markets in the mid-1940s, the USDA's prediction proved wrong and there was a great decline in numbers throughout the United States. Shortly after World War II, construction of the framework for industrial agriculture was put in place and the market for local, seasonal produce was all but destroyed (Brown 2001). Following this shift, a pervasive decline in the

nation's farmers' markets occurred. Following this decline, in 1970, a national total of approximately 340 farmers' markets were in place, many of which did not meet the terms of even the broadest of definitions of farmers' markets.

Though numbers were low in 1970, the decade showed enormous growth of farmers' markets, aided by the passage of the Farmer-to-Consumer Direct Marketing Act of 1976 (Brown 2001). This act specifically created a program to facilitate the marketing of agricultural products in any marketplace including roadside stands, farmers' markets, and vehicles among others (Farmer-to-Consumer Direct Marketing Act of 1976). As a result county agents were able to work with the public to organize farmers' markets (Brown 2001). In 1976, the number of farmers' markets had swelled to 541 nationwide (Linstrom 1978).

Beginning in 1993, the USDA's Agricultural Marketing Service began to assemble a comprehensive list of retail farmers' markets (Brown 2001). This list, the USDA National Farmers' Market Directory, was utilized for the analysis presented in Chapter Five of this report. Farmers' market counts in two-year increments since the beginning of the USDA's Directory in 1993 displayed in **Table 2.2** and **Figure 2.2**, including the most recent count in May 2015 of 8,352 farmers' markets nationwide.

Table 2.2 National Count of Farmers' Market Directory Listings, 1994-2015		
Year	Count	Percent Change from Previous Count
1994	1755	-
1996	2410	27%
1998	2746	12%
2000	2863	4%
2002	3137	9%
2004	3706	15%
2006	4835	23%
2008	4685	-3%

2010	6132	24%
2012	7864	22%
2014	8268	5%
May-15	8352	1%

Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.

Figure 2.2 National Count of Farmers' Market Directory Listings, 1994-2015

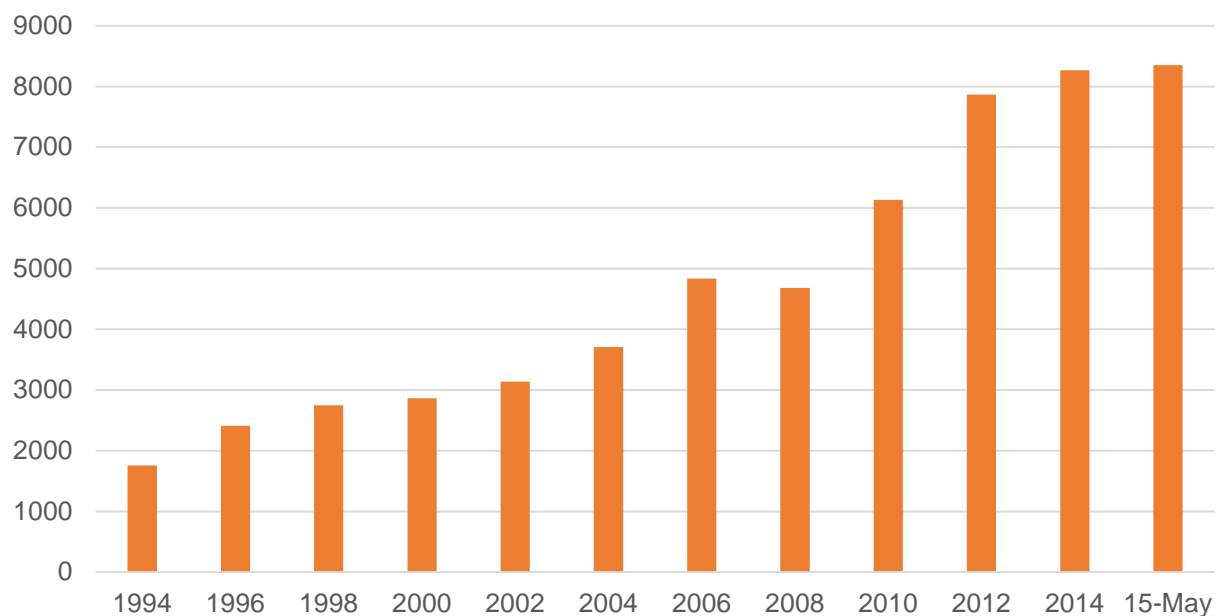


Figure 2.2 National Count of Farmers' Market Directory Listings, 1994-2015. *Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.*

2.2 What is a Farmers' Market?

Although clusters of street vendors may pop up in a variety of settings, offer an assortment of goods, and appear to be farmers' markets, it takes particular features to be defined as a farmers' market. Although other sites, such as "municipal markets", "farm stands", "tailgate markets", or "flea markets" may at times be called "farmers' markets", a true farmers' market has specific characteristics (Brown 2001). Depending on strictness of parameters, the range and number of farmers' markets can be few-and-far-between or fairly extensive. For some, the definition is:

An authentic farmers' market is defined as a recurrent market at a fixed location where farm products are sold by farmers themselves. The term "farmer" in farmers' market is used metaphorically to encompass not only agricultural and horticultural activities but also artisan-type occupations such as bread, cheese, jam and preserve making. (Cameron 2007, p.368)

This definition sets forth several factors to be considered:

- Location
- Frequency
- Seller Identity
- Products Offered

According to Cameron's definition, the location must be fixed, the market frequency recurring, the seller identity is limited to those involved in the creation of products sold, and the products themselves are agricultural in nature, but expanded to those of artisanal creation. The United States Department of Agriculture (USDA) offers another definition:

A farmers' market is defined as a multi-stall market at which farmer-producers sell agricultural products directly to the general public at a central or fixed location, particularly fresh fruit and vegetables (but also meat products, dairy products, and/or grains). (Food and Nutrition Service 2014)

The Food and Nutrition Service (FNS) is perhaps more lax than Cameron, however this definition offers additional parameters to judge a vending situation against:

- Number of Stalls
- Buyer Identity

This definition also sets a specific location for the deemed farmers' market, and restricts the seller identity to farmers and producers like Cameron. The FNS describes the products offered similarly to Cameron, allowing for a range of produce and other products, but without the requirement that they be "artisanal" or produced with skill at a high level of quality. However, the USDA mandates that true farmers' markets have multiple stalls, though it is not specified what the threshold is for number of stalls. Further, the FNS specifies that the buyer-seller relationship is a direct one from food producer to the general public. This implies that the audience is not a specific or specialized group of people, not controlled or private in any way. Rather, the USDA describes a farmers' market as one open to the general public, for access to produce and goods at the market.

Though this report will not analyze each farmers' market in the dataset for its conformity to a definition of a farmers' market, it will be helpful to have a standard for what is and what is not considered an authentic farmers' market. Therefore, the working definition of a farmers' market for the purposes of this report will combine Cameron's and the FNS's viewpoints, as shown in **Table 2.3**, to define farmers' markets.

Table 2.3 Definition of a Farmers' Market	
Characteristic	Parameter
Location	Fixed
Frequency	Continuous, Seasonal, or Temporary
Seller Identity	Farmers or Producers
Buyer Identity	General Public (non-restrictive)
Products Offered	Local, Farm-Fresh Produce or Products (artisanal or similarly constricted)
Number of Stalls	Variable – Appropriate for Community

Note. Adapted from "Farmers' markets as small business incubators and safety nets" by A. Cameron, 2007 & From "What is a farmers' market?" by Food and Nutrition Service of the USDA, 2014.

2.3 What is a Successful Farmers' Market?

The most obvious way of determining success of farmers' markets is whether or not the farmers' markets close or are maintained for years on end. Even as many new markets have been established in the United States in recent years, numerous market up-starts have failed (Stephenson et. Al. 2006). However, while maintenance of the market is, of course, the most important indicator of success, there are other measures surrounding farmers' markets operations that indicate market success.

Economic Viability

An important factor contributing to market continuation or closure is the economic characteristics of the market. The questions that arise in this category of market success including:

- Do the farmers' see acceptable returns for their products?
- Are the market managers adequately rewarded for their efforts?
- Does the market receive sufficient income to adapt and evolve as time passes and changes occur?
- Does the local economy see a boost from the existence of the farmers' market?

Answers to these questions provide important indicators about whether or not the market will succeed or fall prey to a closure outcome. These answers also signpost overall health of the farmers' market.

Whether or not the farmers, the managers, and the local economy benefit from the farmers' market heavily impacts perceptions about the market's success and whether or not involved parties stay committed to maintaining the market.

Community Support and Identity

Farmers' markets that become more integrated into the community and the community's daily or weekly functioning is an important aspect of farmers' market success. Indeed, "Interaction and informal conversation abound at farmers' markets, sometimes being cited as the primary reason for market success, rather than buying and selling" (Francis & Griffith 2011). Therefore, community integration and

effectiveness of catalyzing community socialization are parameters to measure success against. Questions to consider when analyzing success via community support and integration include:

- Does a substantial proportion of the community visit the market?
- Is there noticeable community interaction, from seller to buyer, seller to seller, and buyer to buyer?
- Is there a population of dedicated market supporters, including volunteers, market organizers, and regular patrons?

The answers to these questions reveal a great deal about whether or not the farmers' market impacts the sense of community identity and supports community building. Successful markets attain public support and socialization, resulting in a spontaneous life of their own that provides enjoyment to all involved (Francis & Griffith 2011). "It is clear that what makes markets meaningful and memorable is their unique role as a social space" (Francis & Griffith 2011, p.276). Indeed, once the role of the market expands from the primary purpose of providing a means to exchange goods, to a bona fide social space, the market has truly achieved success in the goal of community support and identity building. Therefore, if the answers to these questions are positive, then the farmers' market has the potential to be a beacon that draws the community in and strengthens it one sale at a time.

Improved Public Health and Well-Being

A common goal for farmers' markets is to improve public health and well-being (Parsons & Morales 2013). Farmers' markets have the capability to contribute to these goals through community-wide increase in healthy foods consumption particularly in neighborhoods where access is low, increase in activity, and changed community food distribution. Whether or not the market genuinely aids in the attainment of such public health and well-being goals is a measure of market success. Questions concerning these aspect of market success include:

- Does the farmers' market reach and attract all segments of the population, therefore enabling a community-wide increase in public health and welfare?
- Is the farmers' market easily accessible by location and design, via walking, public transportation or other active transportation?
- Does the farmers' market support community health and well-being through offering diverse, healthy, fresh foods?
- Does the farmers' market include solely or in part of vendors sourcing food locally?

Answers to these questions and others specific to market circumstances reveal whether or not the market makes a real and identifiable impact on public health by making healthy food readily available and accessible. Such a measure identifies overall market success in achieving community-wide public improvement goals.

2.4 Establishment and Functioning of Farmers' Markets

Vibrant farmers' markets involve a combination of supportive public policy, political commitment from public officials, effective market organization, dedicated supervision from the market manager, and land use planning that contributes to a positive market atmosphere for the public (Morales 2011). Accordingly, farmers' markets require a web of community relationships, from City to organizer, from organizer to sellers, from sellers to buyers. A range of community partnerships are involved in farmers' markets establishment and functioning (Northeast Organic Farming Association of Vermont). Solid relationships between and among all parties is an important step to market viability and long-term presence in a community, both measures of market success. The number and type of community partners vary market by market, but can include people from several sectors of society: business, government, education, non-profits, health, and the like. The general rule is, the more people and organizations are involved, the more vibrant the market will be (Northeast Organic Farming Association of Vermont). This section will

describe the varied roles and goals of involved parties in the establishment and functioning of farmers' markets.

“

Municipal Government

The cities that farmers' markets operate in, if supportive of the market, have different goals than the market manager or sellers. The City often has goals to simply improve public health, safety, and welfare. City officials wishing to do so look to farmers' markets to see many of the “Community Benefits” discussed in Section 3.3 of this report, including keeping local money circulating, strengthening the community, and providing public health benefits. “City officials, community developers, urban designers, and landscape architects have discovered that markets are an effective way to revitalize older and neglected spaces and enliven new ones” (Francis & Griffith). In the process, many cities recognize that farmers' markets aid in achieving citywide goals such as:

- Ensuring community food security
- Identifying and preserving agricultural land
- Maintaining the economic viability of agriculture
- Increasing the availability of healthy foods to lower-income residents
- Helping youth maintain a healthy weight

City officials with these goals in mind can play a large role in establishing and maintaining farmers' markets. “For instance, local level institutions such as city or town councils play a key role in operationalizing FM through granting licenses, negotiating with traders and publicizing events...they can be thought of as trying to enroll producers and consumers in their own localities” (Holloway and Kneafsey 2000). As a result, a positive relationship between City officials and market organizers adds to the likelihood of market success. Likely City candidates include City Council members, city managers, city planners, and City departments such as fire, police or public works. Support from these varied offices

can go a long way towards effective management, efficient operations, successful fundraising, and far-reaching marketing (Northeast Organic Farming Association of Vermont). In particular supportive cities provide particular operational and regulatory support such as (Northeast Organic Farming Association of Vermont):

- Offering free or low-cost space for the market, contributing significantly to vendors' profits.
- Allowing signage for farmers' markets to be placed on city-owned land.
- Providing parking assistance, including blocking of parking spaces or lots for market purposes.
- Placing a link for the farmers' market on their website, increasing publicity and community ownership of the market.

Among other actions, this type of government, municipality-level support goes a long ways for many farmers' markets to allowing market establishment and continued viability.

Market Organizer or Manager

Understanding how a farmers' market works is an important background to assessing value, identifying issues, and making recommendations. While simple in concept, setting up, operating, and maintaining a farmers' market is a complex process with many "moving parts". In fact, the rapid growth in popularity of farmers' markets obscures the fact that a surprising number of them fail (Stephenson, et. Al. 2006).

Quality management of farmers' markets is an integral component to ensuring the success of markets (Northeast Organic Farming Association of Vermont). In order to successfully instate a farmers' market in any community and maintain it long-term, the organizer considers the following aspects and methods (Lakins 2007):

- **Sponsoring Organization (SO)**

While not always necessary, the establishment of a Sponsoring Organization helps to provide structure and support for farmers' markets. The role of the stakeholders in the SO is to create

objectives and goals of the farmers' market, establish by-laws and operating rules for the participating sellers.

- **Identifying and Securing a Location**

Like with all development, location is critical for the success of farmers' markets. Location should be easily accessible for both buyers and sellers. The location should be visible, enjoyable, and have desired amenities within reach, such as trashcans, benches, and restrooms. Securing the site will vary by location, but City permits and public approval is necessary.

- **Marketing and Advertising**

The farmers' market direct buyer-seller relationships requires that both parties are aware of the opportunity a farmers' market provides. Far-reaching marketing and advertising are an important component of the successful farmers' market. Market managers are responsible for getting the news out to the public via signage, media, and word-of mouth, and recruiting producers by contacting farmers market associations, government branches, and again, word-of-mouth.

- **Establishing Rules of the Market**

The smooth running of a farmers' market is largely a function of effective rules and regulations of the market. Rules vary by market, but may include rules for visible ingredient lists for prepared foods, proper sanitation, put-up and take-down times, and similar policies. Identity of farmers' markets may also be related to the established rules of the market, whether it be that the sellers must offer only organic goods, or that no prepared food may be sold, or layout and size of stalls.

- **Budgeting and Financing**

Farmers' markets, like other business endeavors, have both income and expenses. Income comes in the form of fees from participating sellers. Fees determine amount of advertising, maintenance, and other qualities of the farmers' market. Expenses include insurance, permits, advertising and

salaries to market organizers. Market success is largely a function of market managers staying organized and on top of such matters to ensure longevity and viability of operations.

The efficient and effective organization of these various factors contribute greatly to the success of farmers' markets, by contributing to the market atmosphere, capacity to attract buyers and sellers, and their ability to remain lasting fixtures in the communities they are established in. As a result, an effective market manager is often a make-or-break component of markets (Northeast Organic Farming Association of Vermont).

Community Members

Market partners and supporters in the community are an important aspect of keeping markets alive, well, and vibrant. Community partners support farmers' markets in a variety of ways, including (Northeast Organic Farming Association of Vermont):

- Serving with the Sponsoring Organization
- Assisting with operations (set up, signage, and cleaning)
- Fundraising
- Contributing to marketing materials and activities
- Advocating for the farmers' market (word-of-mouth)
- Contributing specialized skills (accounting, graphic design, etc.)

Community volunteers can be a critical component to market longevity. The efforts of volunteers on market day significantly reduce costs of the market operation, and fees from vendors (Northeast Organic Farming Association of Vermont). In this way, an engaged community can go far in keeping the market alive, and as a result, keeping farmers farming (Northeast Organic Farming Association of Vermont). Additionally, community volunteerism results in a greater sense of ownership and community identity

among participants, leading to a higher chance of market permanence, as volunteers will be constant advocates and customers at markets (Northeast Organic Farming Association of Vermont).

2.5 Prevalence of Farmers' Markets

As described in Section 2.1 “History of Farmers' Markets”, farmers' markets in the United States have become increasingly relevant in today's communities and the modern food system. The relatively higher number of markets in comparison to historic numbers shows that markets are an increasingly valued method of food distribution. To provide an overall snapshot, today's farmers' market counts by region of the United States are displayed in **Table 2.4**, showing a total of 8,352 markets and their distribution throughout the regions of the United States. The regional classifications are defined in the United States Region Map in **Figure 2.3**. The farmers' markets percentages by region are displayed in **Figure 2.4**, depicting the uneven distribution of farmers' markets.

Table 2.4 Farmers' Market Counts by United States Region, May 2015				
	Total Number of Zip Codes with Farmers' Markets	Total Number of Farmers' Markets	Percentage of Total Farmers' Markets	Total Population
Midwest	1946	2420	28.98%	67,148,157
Northeast	1534	2047	24.51%	61,398,778
Southeast	1480	1816	21.74%	80,755,850
Southwest	359	427	5.11%	37,974,524
West	1207	1642	19.66%	64,259,215
Total	6526	8352		311,536,524

Note. Adapted from “National Count of Farmers Market Directory Listings” by Agricultural Marketing Services Division of the USDA, 2014.

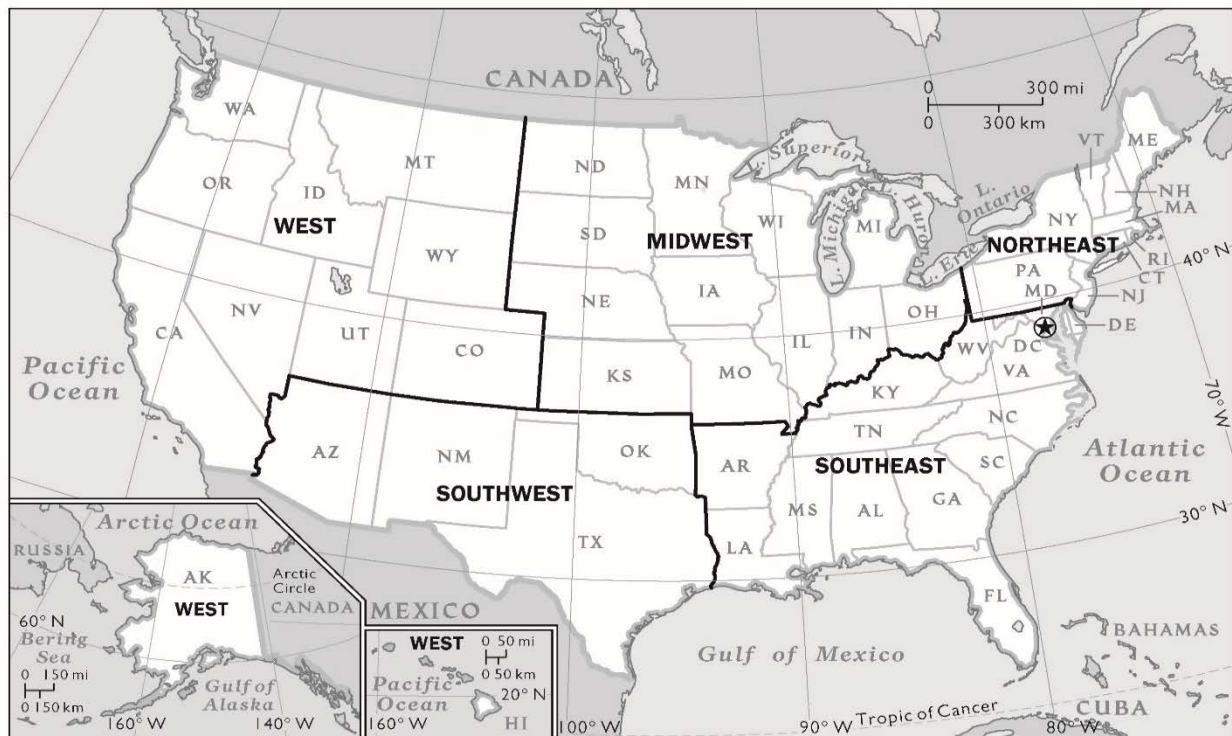


Figure 2.3 United States Region Map. Note. Regions of the United States used for regional counts of farmers' markets. Reprinted from *United States Regions*, by National Geographic, n.d., Retrieved from http://education.nationalgeographic.com/education/maps/united-states-regions/?ar_a=1

Figure 2.4 Total Number of Farmers' Markets by Region

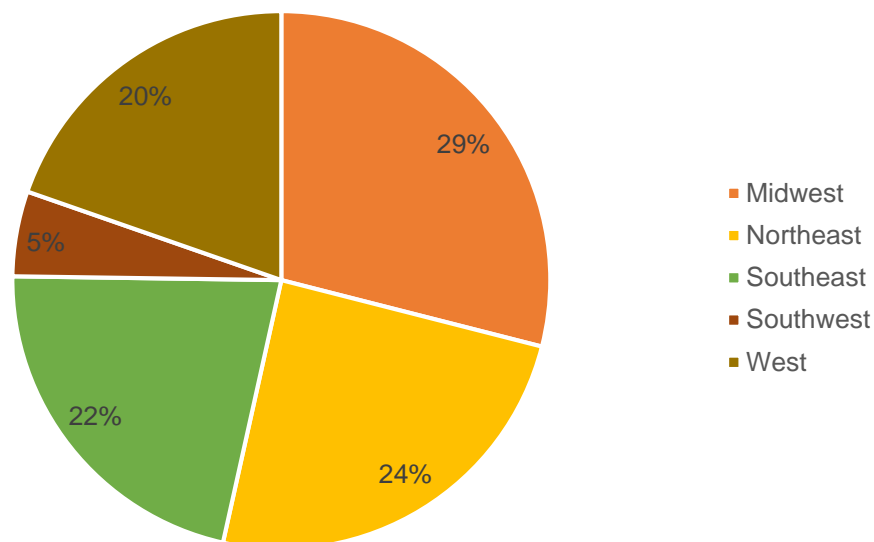


Figure 2.4 Total Number of Farmers' Markets by Region. Note. Adapted from "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.

3 Value of Farmers' Markets

Farmers' markets can have a variety of benefits to the sellers, the buyers, and the community at large.

“The creation of close relationships between farmers and consumers can lead to increased producer incomes as well as improved consumer access to fresh foods, while communities benefit from boosts to local economies” (Baker et. Al. 2009). Indeed, the establishment of a lasting farmers' market and vibrant local food economy has a trickle-down effect, in which all parties are thought to benefit. “Such enterprise, in turn helps to revitalize market activity, strengthen regional economies, rebuild community infrastructure, and insure social welfare” (Delind 2006, p.123). The benefits of farmers' markets as an outlet for local farmers to sell, local consumers to buy, and the community as a whole to thrive are contained in this chapter.

3.1 Seller Benefits

A primary motivation for the establishment of farmers' markets is to support and benefit local farmers. Many farmers' markets are created or attended to support farmers in the area, especially those using desirable practices such as organic production or complying with similar standards, or that it is produced in a relatively less intensive and more sustainable fashion than food produced at industrial-sized operations (Szmigin et. Al. 2003). But how do these farmers, supported by communities at farmers' markets, benefit from this type of sale? This section explains the economic and marketing benefits attained by farmers engaging in direct farmer-to-consumer sales at farmers' markets.

Money

Due to changing agricultural production styles and food distribution practices throughout the 20th century, many rural small businesses like farmers and artisanal producers have been adversely affected, and in some cases, unable to survive economically (Cameron 2007) In the current food climate, farmers are faced with a choice: increasing profits through diversification, new selling practices or ending operations

(Cameron 2007). One common change that increases profits is direct marketing at farmers' markets. A study in California by Kambara and Shelley found that small farms are more dependent on direct marketing methods than their larger counterparts, and that selling at farmers' markets is the predominant channel used. Eighty percent of direct marketers sell their products at farmers' markets for their high levels of customer patronage, high prices, and ability to attain valuable customer feedback (Kambara & Shelley 2002). In all, farmers and other vendors receive several benefits from farmers' markets making likelihood of financial feasibility of their business higher: elimination of middlemen, premium prices for high-quality products, and cash-in-hand.

Farmers' markets provide the venue for farmers to engage in direct marketing, straight from producer to consumer, allowing for increased profit margins in the face of falling prices at supermarkets and other middlemen. "The growing power of supermarkets and industrial food processors has led to farmers' profit margins being squeezed" (Cameron 2007, p.368). In times of increasing competition, an obvious method of adding more padding to the profit margin is by eliminating the middleman, allowing farmers to sell their produce themselves, receiving a higher price. This is called direct marketing, and was allowed and promoted by the Farmer-to-Consumer Direct Marketing Act of 1976, discussed in Section 2.1 of this report. By utilizing this business practice, farmers are able to sell without a middleman, leaving more profit for themselves (Cameron 2007). "As a declining percentage of the food dollar goes to the farmer, this can make all the difference between survival and closure" (Cameron 2007, p.368). Both producer and consumer benefit from the fresh food transaction, while chances of economic survival for the seller are substantially increased.

In addition, farmers' markets provide a venue for discerning customers looking for quality to match with farmers offering just such products. As a result, "Markets create a place where local farmers can sell their food at a higher profit margin..." (Northeast Organic Farming Association of Vermont). At farmers

markets, producers of high-quality produce and specialty products benefit financially with the potential to receive premium prices in return for their goods (Hughes et. Al. 2008).

Lastly, producers selling at farmers' markets gain the obvious benefit of immediately having cash in their pockets in return for sold goods. "A particular farmers benefit includes 'cash-in-hand' rather than having to wait 30-90 days for payment" (Logozaar & Schmit 2009, p,4). Especially for new businesses or businesses operating at low profit margins, immediate payment for goods and quick cash flow is vital, allowing for a greater likelihood of business survival (Cameron 2007).

Connection with Customers and Market Environment

The connection with customers at farmers' markets is not only beneficial for customers with questions and for community bonding, but direct contact with customers provides farmers with an opportunity to create long-lasting connections with customers and for marketing farms and products (Hughes et. Al. 2008) Farmers' markets are an ideal location to connect with the markets that they are aiming towards for both new producers and for long-term producers through the following methods:

Farmers' markets can therefore accelerate business development by enabling the farmer to deal directly with customers to learn about what they are looking for in a product and packaging, gain media exposure for new specialty products, develop an interaction with retailers and other interested businesses, educate the customer by providing tastings and giving information...
(Cameron 2007, p.370)

For the new farmer or producer of specialty items, the farmers' market can act as a "business incubator" (Logozaar & Schmit 2009). "Business incubators have long been recognized as useful mechanisms whereby fledgling enterprises can survive and grow in a supportive environment" (Cameron 2007, p.369). Farmers' markets act as just such support to new farmers, or producers of artisanal or specialty goods selling at markets. Farmers' markets may be the only option, or one of few options for small rural

entrepreneurs, either farmers or other producers, to establish or enhance their market niche in the communities they work in (Cameron 2007). In one 2004 study, it was found that many vendors reported that selling at farmers' markets helped increase sales elsewhere, but that the vendor-consumer interaction and feedback led to the most innovative marketing practice, reaching the community and customers desired (Hinrichs et. Al. 2004).

For the long-term or large farmer, community connections may lead to increased sales or ability to expand. Reliable farmers with consistently quality produce may find farmers' market patrons to be repeat customers. These continuous vendors may gain a reputation in the community for quality, and benefit greatly from word-of-mouth marketing in the community. Additionally, the farmers' market can act as a testing grounds for new products, new varieties or to a new market (Cameron 2007).

3.2 Buyer Benefits

Increasing concern over issues such as food safety, food security, food nutrition, and food effects on health have raised consumer awareness about the produce and products chosen for consumption. These issues have led to an increase in alternative options for consumers to purchase food from, including farmers' markets (Dodds, et. Al. 2014). Farmers' markets may offer a wide variety of foods and flavors, shown in **Table 3.1** and **Figure 3.1**.

Table 3.1 Offerings at Farmers' Markets, May 2015							
Offering	Yes	Yes Percentage	No	No Percentage	No Answer	No Answer Percentage	Total
Vegetables	3512	42%	4875	58%	0	0%	8387
Fruits	879	10%	7508	90%	0	0%	8387
Cheese	2531	30%	5856	70%	0	0%	8387
Eggs	3655	44%	4732	56%	0	0%	8387
Meat	2755	33%	5632	67%	0	0%	8387

Prepared Foods	3026	36%	5361	64%	0	0%	8387
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Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.

Figure 3.1 Percentage of Farmers' Markets as they Have Particular Offerings, May 2015

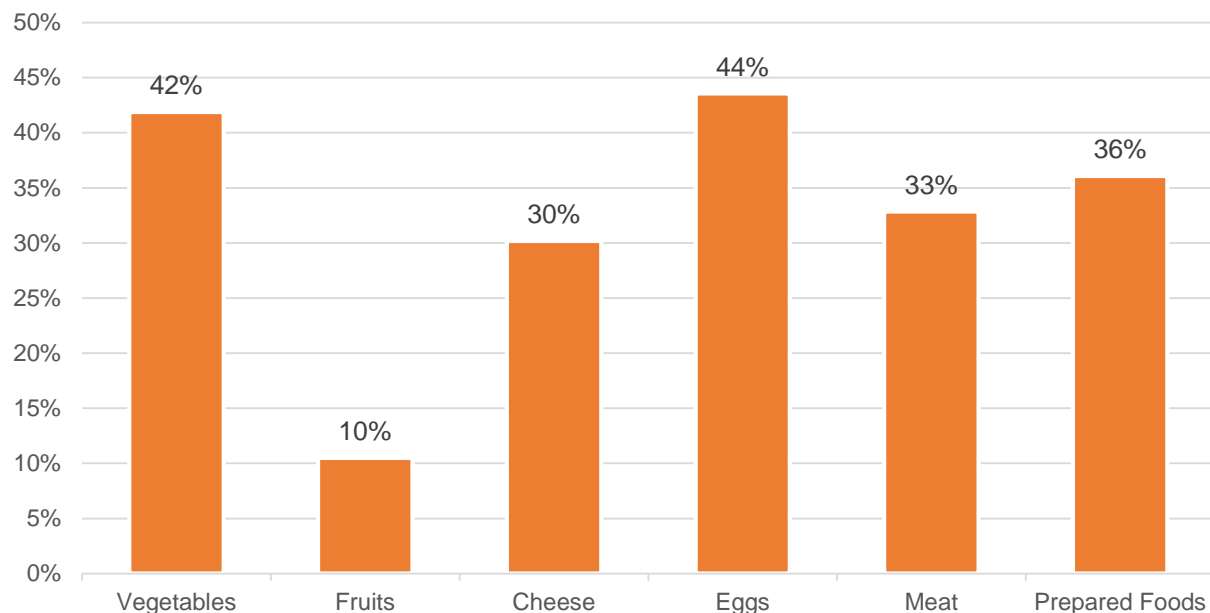


Figure 3.1 Percentage of Farmers' Markets as They Have Particular Offerings, May 2015. *Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.*

Such venues for fresh food purchases allow for consumers to have access to products that may be otherwise unavailable. Indeed, "One of the driving forces in the regeneration of farmers' markets is the increasing demand for higher quality food by more discriminating consumers" (Cameron 2007, p.368).

This section outlines the benefits that the discriminating or otherwise consumer may wreak from the presence of one or more farmers' markets in their community: satisfying demand for organic and/or local foods that are perceived to be healthier, often of higher quality, and more trustworthy in the eyes of consumers.

The Organic Food Movement

A trend towards eating organically-produced foods and products emerged and was popularized in response to perceived dangers and deficiencies of the modern food system (Delind 2006). American consumers have had concerns over food safety in this system due to inadequate inspections, use of antibiotics, and use of animal waste products, among others (Delind 2006). The organic food movement counteracts these forces, with a focus on holistic health: ecologically and within the human body (Delind 2006). To meet the ever-growing popularity of the organic food demand, the number of farmers' markets aiming to provide locally-produced, organic food continues to rise (Dodds, et. Al. 2014). **Table 3.2** and **Figure 3.2** display the current number of recorded farmers' markets that do and do not offer organic options.

Table 3.2 Organic Offerings at Farmers' Markets, May 2015							
	Yes	Yes Percentage	No	No Percentage	No Answer	No Answer Percentage	Total
Organic Offerings	2102	25%	1072	13%	5213	62%	8387

Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.

Figure 3.2 Organic Offerings at Farmers' Markets by Percentage, May 2015

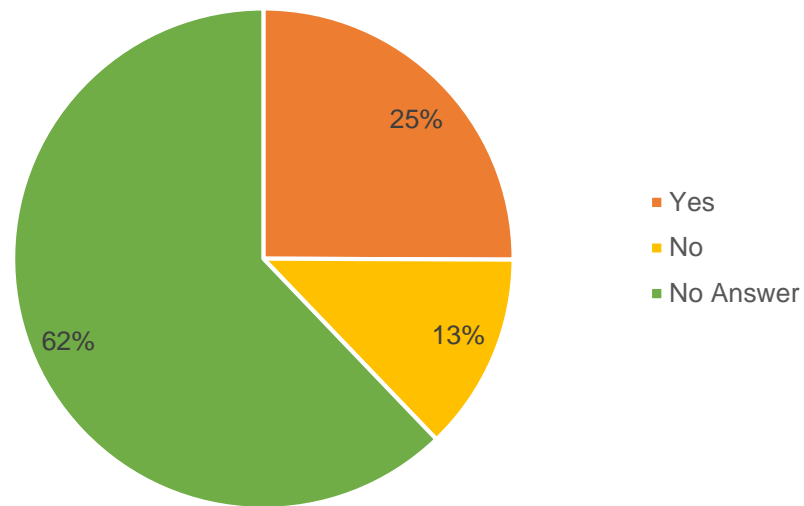


Figure 3.2 Organic Offerings at Farmers' Markets by Percentage, May 2015. *Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.*

Farmers' markets provide a medium for the alarmed consumer to gain access to fresh, organic foods.

Growth in organic food markets has paralleled the growth in organic agriculture, reaching \$40 billion in sales in 2006 (Berlin et. Al. 2009). However, while the organic food movement had every intention of avoiding the short-comings of the modern, industrialized food system, it was regulated poorly by government oversight and resulted in a booming business of industrialized organically-produced foods, the opposite state of the original intent (Dodds et. Al. 2014). The result: many health-conscious consumers chose to switch from purchasing organic foods to local foods.

The Local Food Movement

The local food movement can be considered a "second generation" response to the food system issues brought up by the organic food movement (Delind 2006). The local food movement responds to the concerns of the organic food movement, food safety and nutrition, without the negative side-effects of the money-making, organic industry: large-scale, long-distance, and industrialized business. There have been

numerous studies over consumer preferences of organic versus local foods, which have predominantly shown a priority of local over organic (Dodds et. Al. 2014). In one nationwide survey, 30% of the consumers participating indicated that they prefer to buy fresh produce from farmers' markets or directly from the producer than from an indirect link to the producer like a grocery store (Berlin, et. Al 2009). Another study, conducted in New England in 2009, revealed that surveyed consumers preferred local, non-organic products to non-local, organic products when given the choice (Berlin, et. Al, 2009). Both health and environmental concerns are often behind the "buy local" movement, causing the number of farmers' markets to grow at an extraordinary rate (Bell & Beeston 2011).

The local food movement combats concerns about food safety and nutrition with a relative absence of food miles, enabling "...[local] processed foods to avoid the compromising demands of extended shelf life, transport, packaging, and/or synthetic re-fortification" (Delind 2006, p.123). According to this movement, local food represents an option for health and personal improvement. Local food is understood to be fresher, riper, more nutritious, and as a result, healthier (Delind 2006). Even more so than the organic food movement, the emergence and rise of the local food movement in the 1980s and 1990s is correlated with a rise in farmers' markets. Consumers at this time were led to local food outlets such as farmers' markets, as they provided fresh, nutritious foods. A 2008 study found that farmers' market customers associate "good food" with "seasonal fresh food", nutritional content, food safety, and food grown or produced locally (Joseph et. Al, 2008), all of which are offered at an authentic farmers' market. Further, another study found that the most important reason that shoppers buy from local and small farm producers (at outlets such as farmers' markets) is food freshness (Berlin, et. Al.2009). Other reasons and benefits of shopping at farmers' markets with local food are displayed in **Table 3.1**, displayed in order of importance to shoppers.

Table 3.3 Shoppers' Motivation for Visiting Farmers' Markets		
Rank	Motivation	Percentage of People Who Checked this Option
1	Quality of Product	82.2%
2	Supporting Local Community	75.5%
3	Healthier Diet	52.7%
4	Environmental Concerns	50.7%
5	Interaction with Vendors	45.0%
6	Family Outing	41.6%
7	Convenience of Location	35.6%
8	Value for Money	35.2%
9	Social Opportunity	32.6%
10	Variety of Products	16.1%
11	Other	9.2%

Note. From "Consumer choice and farmers' markets" by R. Dodds, et. Al., 2013, *Journal of Agricultural and Environmental Ethics* 27(3), p.407.

Federal Food Benefits

Many of the farmers' markets in the system of 8,352 farmers' markets that exist today in the United States currently accept payment from patrons in the form of federal food assistance programs, assisting low-income families and individuals in consuming healthy foods. The types of food assistance and nutrition programs payment accepted at farmers' markets include (Agricultural Marketing Service 2015):

- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)**
 WIC is a federal program that provides nutritious foods, education and health and service referrals to participants (Food and Nutrition Service 2013). For no charge at all, "WIC serves low-income pregnant, postpartum and breastfeeding women, and infants and children up to age 5 who are at nutrition risk" (Food and Nutrition Service 2013).

- **WIC Cash Value Vouchers (WICcash)**

In 2006, the Food and Nutrition Service expanded the WIC food package to allow for cash value vouchers called WICcash (Food and Nutrition Service 2013). The vouchers which have a value of \$8 for women and \$6 for children, allow WIC participants to purchase fruits and vegetables.

- **Senior Farmers Markets Nutrition Program (SFNMP)**

SFNMP is a federal program that provides low-income seniors with coupons to exchange for foods and goods at direct marketing venues, such as farmers' markets, stands and community-supported agriculture (Food and Nutrition Service 2015).

- **Supplemental Nutrition Assistance Program (SNAP)**

SNAP is a federal program that offers nutrition assistance to millions of low-income families and individuals and is the largest food and nutrition program in the United States (Food and Nutrition Service 2014).

Of these possible options for food assistance, farmers' markets may accept none, one or multiple of these payment types, allowing greater access to healthy foods for participants of these programs: low-income individuals and families, including seniors, women and children. The current acceptance rate of each of these types of food assistance is shown in **Table 3.4** and in **Figure 3.3**.

Table 3.4 Farmers' Market Acceptance Rate for Food Assistance Programs, May 2015			
	Number of Farmers' Markets that Accept	Acceptance Percentage	Total Responses
WIC	2,422	28.88%	8,387
WICcash	1,153	13.75%	8,387
SFNMP	2,524	30.09%	8,387
SNAP	2,292	27.33%	8,387

Note. From "National Count of Farmers Market Directory Listings" by Agricultural Marketing Services Division of the USDA, 2014.

Figure 3.3 Acceptance Percentages for Food Assistance Programs, May 2015

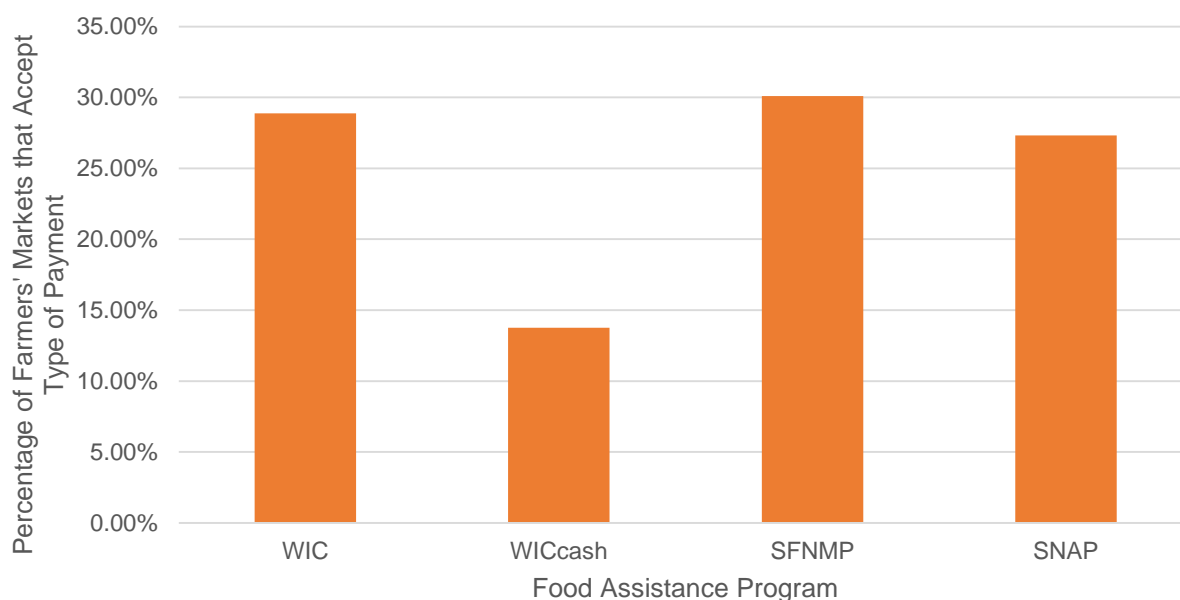


Figure 3.3 Acceptance Percentages for Food Assistance Programs, May 2015. Note. From “National Count of Farmers Market Directory Listings” by Agricultural Marketing Services Division of the USDA, 2014.

The acceptance rates for WIC, WICcash, SFNMP, and SNAP program payment ranges from nearly 14% to almost 30% of the farmers’ markets in the directory. Some farmers’ markets may accept multiple types of food assistance payment, while others do not accept any. However, the number of farmers’ markets that accept food assistance is relatively high compared to historic levels of acceptance and is increasing among farmers’ markets, providing increasing levels of access to healthy and fresh foods to low-income individuals (CitySeed & BuyCTGrown 2010).

3.3 Community Benefits

In addition to individual-level benefits for buyers and sellers, farmers’ markets are thought to have a large variety of community-wide benefits including building a sense of locality, strengthening community ties, increasing face-to-face contact between members of the public, heightened resilience and adaptive capacity. In communities facing unhealthy food environments or are considered “food deserts”, farmers’ markets are believed to have positive health benefits.

Economic Impact

Market places have increasingly been recognized as significant sources of retail trade (Morales 2011).

The business transactions at a farmers' market is the result of a framework of relationships between business and social life (Morales 2011). The relationships forged between sellers and the public are critical to the success of the market, local farmers. This relationship also has a huge part in ensuring far-reaching economic impact farmers' markets across all sectors of a local economy (Morales 2011).

Communities across the United States recognize the both the mutual benefit of the farmers and the customers, but also the wider, community economic benefits derived from local transactions. Farmers' markets have grown not only in number of markets around the United States, but also in number of farmers participating. According to Hughes and others, in 1994, 20,946 farmers participated in farmers' markets, and by 2000, 66,700 farmers participated, looking to sell to the public simply and at potentially higher sales prices. The average number of customers per week grew from 915,777 in 1994 to 2,760,000 in 2000. As a result, the number of dollars flowing, and the local economic impact of farmers' markets has continued to grow in the communities where farmers' markets are established (Hughes, et. Al. 2008).

Local and regional economies benefit from the enhanced retention of local dollars caused by farmers' markets (Hughes, et. Al. 2008). Community farmers' markets reeled in \$40 billion in sales nationwide in 2006, much of which switches hands among the population in the immediate vicinity of the farmers' market (Berlin et. Al. 2009). In addition, farmers markets bring people to community downtowns, creating a "spillover" economic effect on downtown businesses and services (Northeast Organic Farming Association of Vermont). Several states have launched studies to determine just how much of an impact the increasing numbers of markets have on their statewide economy. For example, in 2004, it was estimated that the State of Iowa had \$20 million in annual direct sales and a gross impact of 471 added jobs from its farmers' markets (Otto & Varner 2005). In another state example, producer survey results in 2008 from the state of West Virginia revealed \$1.725 million in annual direct sales and a gross impact of

119 added jobs (Hughes et. Al. 2008). Further economic impacts associated with farmers' markets in West Virginia can be seen in **Table 3.2** including an added total of \$2,390,000 of industry output from a wide variety of industries in the State.

Table 3.5 Distribution of Farmers' Market Economic Impacts in West Virginia, 2008						
Aggregate Sector	Industry Output		Gross State Product		Labor Income	
	Amount	Percent	Amount	Percent	Amount	Percent
Agriculture-resources	\$ 1,772,000	74.1%	\$ 1,126,000	76.0%	\$ 468,000	71.2%
Mining-utilities-construction	\$ 58,000	2.4%	\$ 36,000	2.4%	\$ 15,000	2.3%
Manufacturing	\$ 97,000	4.1%	\$ 32,000	2.2%	\$ 18,000	2.7%
Trade-transportation	\$ 134,000	5.6%	\$ 90,000	6.1%	\$ 55,000	8.4%
Financial activities	\$ 129,000	5.4%	\$ 87,000	5.9%	\$ 17,000	2.6%
Professional-technical services	\$ 53,000	2.2%	\$ 30,000	2.0%	\$ 22,000	3.3%
Educational-health-social services	\$ 73,000	3.1%	\$ 43,000	2.9%	\$ 38,000	5.8%
Entertainment-travel-other services	\$ 53,000	2.2%	\$ 23,000	1.6%	\$ 20,000	3.0%
Government	\$ 21,000	0.9%	\$ 14,000	0.9%	\$ 4,000	0.6%
Total	\$ 2,390,000		\$ 1,481,000		\$ 657,000	

Note. From "Evaluating the economic impact of farmers' markets using an opportunity cost framework" by D. Hughes, et. Al., 2008, Journal of Agricultural and Applied Economics 40(1), p.259.

Similar economic impacts may be seen in different states, depending on the prevalence and success of farmers' markets.

Community Building & Socialization

Farmers' markets are thought to contribute to community identity and community bonding. Farmers' markets become community centers, where the general public converges for a number of hours on a set day of the week, unlike any other community activity or event, fostering public life and socialization (Francis & Griffith 2011). Indeed markets bring members of the community together, strengthening community fabrics (Northeast Organic Farming Association of Vermont). Shown in **Table X.X**, common motivations for visiting farmers' markets revolve around a sense of community, including supporting the local community, family outings, social opportunity and interaction with vendors.

Socialization and interaction is an important aspect of farmers' markets, from buyer to seller, and within each group. The interpersonal interaction at farmers' markets is an important aspect of farmers' markets, setting them apart from other food-buying experiences. For example, a study in 2008 found that shoppers at farmers' markets place value on the social interaction at farmers' markets but not at the grocery store (Dodds, et. Al. 2013). Interaction is not only beneficial on the psychological level, but direct farmer-to-consumer interaction allows consumers to question farmers about the process of producing the food they are buying, including about pesticide use, herbicide use, or even advice about cleaning, storage or cooking (Hughes, et. Al. 2008). Farmers' markets have established themselves as an important social space for the communities that they operate in and there is a great deal of evidence that they will continue to expand as an important type of public space, contributing to a vibrant and multifaceted social ecology in the cities they exist in (Francis & Griffith 2011).

Food Resilience in Communities

Farmers' markets are often seen as an important method to increase resilience in communities. This is because they offer a venue for the exchange of local goods and money within the community and strengthen the financial viability of the local food system (Northeast Organic Farming Association of Vermont). Markets are part of regulatory remedies to improve and reinforce local food systems (Morales

2011). Each farmers' market vendor and sale helps to decentralize the modern food system in areas where farmers' market exist. "Here the decentralization of resource ownership and power lays the groundwork for a more responsive and responsible citizenry. Indeed, the term 'civic agriculture' has been coined to collectively identify the many, creative, market-based arrangements – CSAs, farmers markets, coops, u-picks – that have recently appeared (or reappeared) within communities and neighborhoods across the country" (Delind 2006, p.123). As such, farmers' markets are seen as a primary means for communities to begin taking control of their own food and futures.

This mentality for increased food system resilience has several benefits, including environmentally-friendly practice and increased food security. "Less individually focused, there are those who for energy and environmental reasons question the logic of shipping food half-way around the world or having all foods available 24-7. Likewise, in the aftermath of 9-11, many people have grown concerned about food security, realizing, perhaps for the very first time, that the nation's food supply (as well as the human and natural resources on which it depends) is precarious," (Delind 2006, p.122). Emerging research exists that supports the environmental health impact farmers' markets and local food systems have. In a 2005 study, it was found that food miles and greenhouse gases associated with transport were significantly lower for food taken to the farmers' market in Toronto, Canada rather than a nearby supermarket (Bentley & Barker 2005). Therefore, the community benefits from a decrease in regional air quality and quality of life through the decrease in greenhouse gas emissions.

Public Health

It has been suggested that farmers' markets offer opportunities to improve individual and public health in the communities they are established in (Morales 2011). Many public market initiatives have been developed by the public sector to provide safe and healthy food, such as the USDA Agriculture Marketing Service (Morales 2011). This section will discuss both the need for increased public health and the ways in which farmers' markets address this need.

Dramatic rises in obesity rates, particularly among socioeconomically disadvantaged populations, over the past two decades have caused great concern among policy and decision makers in the United States (Ford and Dziewalkowski 2008). “More than one-third of U.S. adults (over 72 million people) and 17% of U.S. children are obese. During 1980–2008, obesity rates doubled for adults and tripled for children” (National Center for Chronic Disease Prevention and Health Promotion 2011, p.2). The cause of rising obesity-related health issues, such as coronary disease, stroke, diabetes, hypertension, cancers, and other conditions has long been debated (Troy, et. al 2010 & National Center for Chronic Disease Prevention and Health Promotion 2011). Such explanations for obesity as biological predisposition, poor nutritional habits, and lack of exercise have been suggested, and in part proven to contribute to the onset of obesity-related health ailments (Troy, et. al., p.58, 2010). However, attributing the rise in obesity-related diseases to a causal relationship of individual behavior is overly simplistic.

According to studies by the USDA's Economic Research Service, there is clear correlation between the food environment and the kinds of foods that the affected population eats. A focus on food access has been shown to lead to differences in diet and health outcomes (U.S. Department of Agriculture: Economic Research Service, et. Al. 2009). It is thought that the environment people live in impacts lifestyle choices that contribute to health. A review of 38 studies of food environments has found moderate evidence in support of a causal relationship between neighborhood food environments and dietary health (Caspi, et. al., 2012).

Therefore, planning for the presence of, proximity to, distribution of, and system access to affordable, healthy food is instrumental in improving overall community health. It is thought that farmer's markets can provide just such healthy food in communities they are established in. If approached collaboratively, groups such as planners, local government officials, and food retailers can ensure a healthy food environment, through the formation of farmers' markets and other means, in the communities they serve (Centers for Disease Control and Prevention, 2014).

In addition to providing healthy food and making it more accessible to those in city neighborhoods, many markets incorporate educational tools to provide health and nutritional information (Morales 2011). Some markets are geared specifically towards improving levels of public health: "Several markets have incorporated health services and nutritional education such as health screenings, immunizations, and cooking classes that would otherwise never reach community members" (Morales 2011, p.8). Through providing nutritional foods, a health-oriented environment, and nutritional materials, farmers' markets support healthy communities, and improve individual and overall public health.

Ability to Address Food Deserts

In addition to improving general public health, farmers' markets are touted as a means to address "food deserts." A growing body of literature on local food environments and its correlated effects on health has particularly responded to evidence of "food deserts" existing in the United States (Caspi, et. al., 2013). A food desert is either an urban neighborhood or rural town without access to fresh, healthy, and affordable food (U.S. Department of Agriculture, n.d.) It is estimated that 23.5 million people in the United States live in food deserts, with over half of that number being in low-income areas (U.S. Department of Agriculture, n.d.). A food desert can manifest itself in different ways, whether it be an area that has no food access, overly expensive and unattainable healthy food options, or is only served by fast-food restaurants or convenience stores (U.S. Department of Agriculture, n.d.).

A key strategy of addressing food deserts has been through the installation of farmers' markets in these communities (Morales 2011). One important benefit of farmers' markets is that food-related inequalities can be addressed through systematic and thought-out placement of farmers' markets by providing increased access to healthy foods and healthy lifestyle information. Increasingly, city officials with this aim in mind are redeveloping ordinances in inner cities and urban areas to promote markets and tie them to health goals of the City (Morales 2011). Likewise, the federal government is supporting low-income access to farmers' market goods by ensuring federal food program benefits are available at farmers'

markets. These government efforts to support markets are manifested by providing electronic benefit transfer machines and other financial support at the food desert markets(Morales 2011).

4 Issues with Farmers' Markets

Farmers' markets are constantly heralded as ideal spaces by alternative food advocates, assuming that the benefits of direct seller-to-buyer interaction, shortened food distances, and community building, stand above the traditional system. Although it is true that farmers' markets can be an excellent tool to bring fresh foods to the general public, strengthen the sense of community, and put money in local farmers' pockets, farmers' markets are not always in place where they are most needed. More commonly, farmers' markets are set up in locations with demand: where a privileged consumer base has a high level of awareness about the food they are purchasing. Moreover, in these places, the very intent of farmers' markets is somewhat defeated. Shopping at these farmers' market is an "activity" or an "outing", not a much-needed resource for fresh food. In fact, in communities with farmers' markets, there may even be barriers to entry, which the wealthy and enlightened may easily leap, but those needing accessible, nutritious, fresh food most are caught behind these barriers. This section discusses the current issues associated with farmers' markets in the United States and abroad.

4.1 Location and Atmosphere of Farmers' Markets

Farmers' markets are commonly located in middle to upper class neighborhoods. The reemergence of farmers' markets is tied to these more affluent groups, their suburban environments, and interest in healthy food (Morales 2011). Often in these environments, they provide a location for an "outing" more than a medium for accessible, fresh food. Most markets are established in areas where palpable demand exists, often communities with a great deal of knowledge and opportunity (Guthman 2008). "As one farmers' market manager noted on the survey form, 'farmers' markets are good for everyone, but many of them are being located in 'high-end' areas. The farmers may make more money there, and the higher income communities are 'entertained' by outdoor markets'" (Guthman 2008, p.392). Arguably, these markets are still beneficial for the middle to upper class income groups they serve, but conversely, it can

be argued that this use of farmers' markets doesn't fulfill its full potential to address social and public health concerns.

For many served by farmers' markets, the market is less about shopping for fresh, healthy food, and more about the experience, the "activity" that farmers' markets offer. Indeed, it could be said that to middle and upper class shoppers, "Their *difference* from other forms of food shopping is their appeal..." (Bell & Beeston 2011, p.58). In fact, the farmers' market atmosphere for those market shoppers there as an "outing" is so important that some market vendors are encouraged to use particular presentation methods like baskets and crates, provide seating and entertainment, offer samples, or arrange their goods in such a way or another. So much so that at some markets, the atmosphere and presentation is put together like a farmers' market "theme" (Bell & Beeston 2011). Farmers' markets can stray so far from their original role as simply a food-providing entity that it is like a performance, a performance with a hint of rural nostalgia. "Within both country and urban spaces the farmers' markets draw from mythologies about the idyllic rural community. The ionization of rural culture, identity and values is exploited for contemporary consumption" (Bell & Beeston 2011, p.57). In these farmers' markets, the original intent of providing a direct farmer-to-consumer relationship is sometimes forgotten, where vendors are instead thought of as cunning and sociable business people, not rural farmers.

4.2 The Typical Shopper

It is proposed by a number of writers that farmers' markets are more than small-time, weekly community gatherings over produce. Rather, the recent proliferation represents a deliberate class-based attempt to combat the modern food system via control of the local: supporting small farmers and downtown culture (Bubinas 2011). Studies covering the demographic profile of farmers' markets shoppers indicates that the audience of farmers' markets is often disproportionately female, white, and in middle to high income groups. A 2013 study in Canada offers an example of access issues associated with farmers' market audiences. According to this survey, the average household income of farmers' market patrons that

responded was \$126,700, well above the average income of Canada (Dodds et. Al. 2011). Additionally, this survey recorded that over 75% of the patrons that responded were white, either of European or Canadian ethnicity (Dodds et. Al. 2011). Similar demographic results are repeated in studies by Eastwood in 1999 and Guthman in 2008. According to a Tennessee study that studied six area farmers' markets, most farmers' market visitors or survey respondents nearby farmers' markets were white and of the highest income group. In some cases, these groups were present at higher percentages than these groups were for their respective counties (Eastwood 1999). According to Guthman's 2008 article, existing research suggests that people of color, particularly African Americans, do not participate in farmers' markets proportionate to the population. Moreover, Guthman's research produces evidence that farmers' markets disproportionately serve white and middle to upper income populations (Guthman 2008).

4.3 Barriers to Entry

The benefits of farmers' markets are well-publicized, everywhere from scholarly articles to government brochures to coalition websites. However, along with the benefits to some, come the barriers to the many. There is evidence that certain barriers exist to attendance to and shopping at farmers' markets. One barrier that restricts farmers' market visitation is location. "Many low-income families are not able to shop at local farmers' markets due to the location" (Perkins 2014, p.12). Location is intimately linked with transportation, both of which have a strong impact on ability of low-income individuals to shop at farmers' markets, especially those that do not own automobiles (Perkins 2014). Another barrier is price. As discussed in Section 3.1 "Seller Benefits", farmers often receive premium prices at farmers' markets for their produce, prices which benefit sellers, but restrict the potential audience of goods away from low-income individuals. Three studies in varied geographic locations on barriers to farmers' market usage are used to further examine barriers to entry.

Barriers in Michigan

According to the United States National Farmers' Market Directory in May 2015, Michigan has 340 farmers' markets in 284 unique zip codes. The overall population of Michigan in 2010 was 9,886,095 people with a median income of \$48,411 and a mean income of 64,753. The percentage of population below the poverty level in 2013 is 16.8%

In a 2010 study using focus groups in both rural and urban locations in the State of Michigan, the primary barriers to farmers' market visitation were (Conner & Smalley 2010):

- Unmet expectations at visit farmers' markets of presence of high quality, fresh and naturally grown produce and products
- Time constraints and inconvenient hours
- Location of markets
- Inadequate farmers' market advertisement and signage
- Inability to utilize EBT at farmers' markets or unawareness that farmers' markets did accept EBT
- Unwelcoming atmosphere from:
 - Unfriendly vendors
 - Language barriers
 - Non-kid-friendly environment
 - Overly crowded or overly empty setting
 - Dilapidated facilities

These barriers to farmers' market visitation in Michigan was discovered based on focus group meetings with a diverse set of Michigan residents. The results indicated that the most important barriers to farmers' market use were unmet expectations, time constraints, inconvenient hours and location of markets, as these barriers came up in every focus group meeting.

Barriers in Kentucky

According to the United States National Farmers' Market Directory in May 2015, Kentucky has 134 farmers' markets in 115 unique zip codes. The overall population of Kentucky in 2010 was 4,361,333 people with a median income of \$43,036 and a mean income of \$58,621. The percentage of population below the poverty level in 2013 was 18.8%

In a Kentucky study completed in 2014, similar barriers to use of farmers' markets were discovered. Common barriers in this Kentucky study were "I only come when I need something", "Extreme weather", and "Market days and hours". The number of barriers and response prevalence of these barriers is shown in **Table 4.1** and **Figure 4.1**.

Table 4.1 Barriers to Use of Farmers' Markets in Kentucky, 2014		
Barrier	Number of Responses	Percentage
"I only come when I need something"	39	42.4%
Extreme weather	19	20.7%
Market days and hours	13	14.1%
Out of the Way	11	12.0%
Prices	7	7.6%
No EBT	1	1.1%
Transportation barriers	1	1.1%
Parking	1	1.1%
Total	92	

Note. From "Farmers' market shopping behaviors and the association of fruit and vegetable intake" by S. Perkins, 2014, University of Kentucky Theses and Dissertations-Dietetics and Human Nutrition, p.26.

Figure 4.1 Identified Barriers to Visiting Farmers' Markets in Kentucky by Percentage, 2014

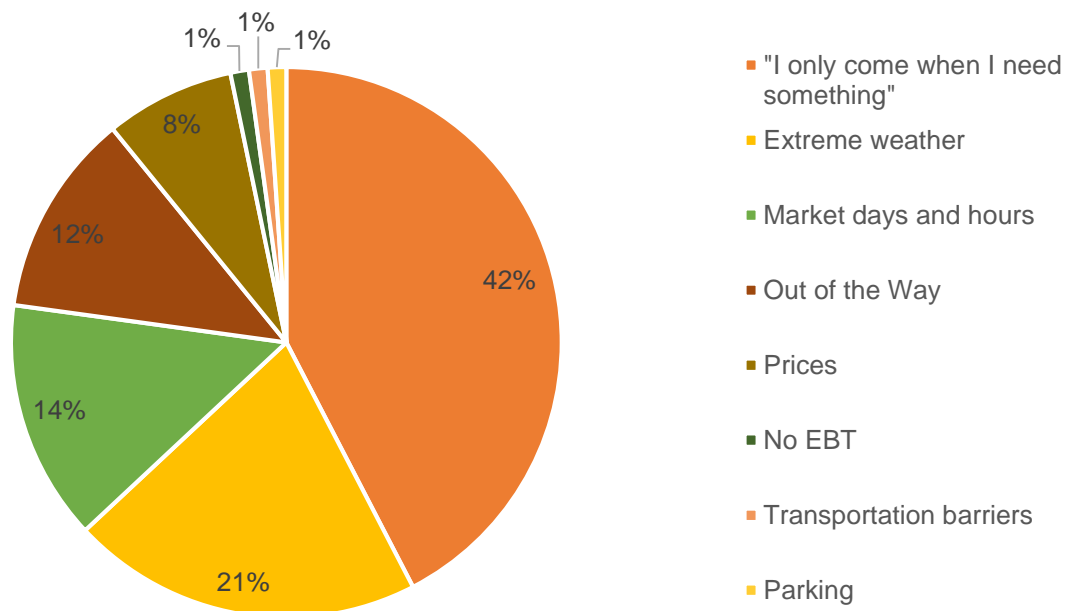


Figure 4.1 Identified Barriers to Visiting Farmers' Markets in Kentucky by Percentage, 2014. *Note.* From "Farmers' market shopping behaviors and the association of fruit and vegetable intake" by S. Perkins, 2014, *University of Kentucky Theses and Dissertations-Dietetics and Human Nutrition*, p.26.

Once again, this study's population consisted of those who currently attend farmers' markets. In addition, the majority of respondents were white, with over half of which had received a college education (Perkins 2014). To this study population the most common answers were "I only come when I need something", "Extreme weather", "Market days and hours" and "Out of the way". Once again, it can be interpreted that such barriers would be even stronger in the population unable to attend farmers' markets or unaware of their existence. However, these answers lead to several conclusions about barriers to farmers' market use (Perkins 2014):

- Farmers' markets are likely not the location at which participants did the bulk of their grocery shopping.
- Farmers' markets being located outdoors can a major influence on number of attendees, especially in places that experience extreme weather often.

- Farmers' markets days and hours are also considered to be a barrier. While the days and times of the farmers' markets these respondents attended are unknown, it can be noted that this factor impacts attendees.

Barriers in Toronto, Canada

In a 2013 study in Toronto, Canada using 300 surveys distributed at two farmers' markets, it was found that some farmers' market patrons found "limited hours of operation", "location" and "price" to be the largest barriers to visiting farmers markets, shown in **Table 4.2** and displayed by percentages in **Figure 4.2**.

Table 4.2 Barriers to Visiting Farmers' Markets, 2013		
Rank	Barrier	Percentage of People who Checked this Option
1	None	43.4%
2	Limited Hours of Operation	22.9%
3	Location	15.3%
4	Price	13.9%
5	Other	10.4%
5	Accessibility of Transportation	10.4%
7	Traffic	8.0%

Note. From "Consumer choice and farmers' markets" by R. Dodds, et. Al., 2013, *Journal of Agricultural and Environmental Ethics* 27(3), p.411.

Figure 4.2 Identified Barriers to Visiting Farmers' Markets in 2013 by Percentage

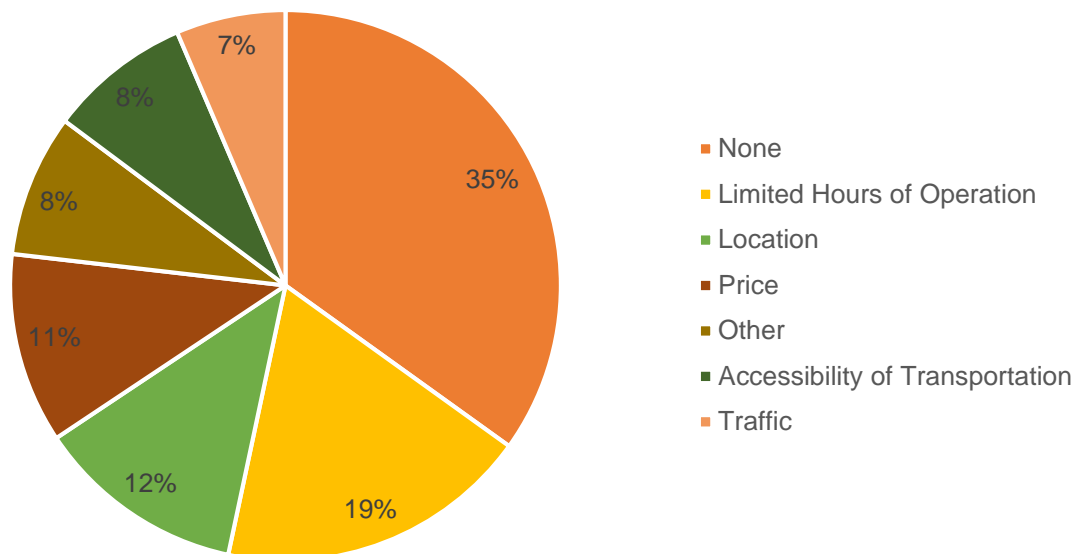


Figure 4.2 Identified Barriers to Visiting Farmers' Markets in 2013 by Percentage, 2013. Note. From "Consumer choice and farmers' markets" by R. Dodds, et. Al., 2013, *Journal of Agricultural and Environmental Ethics* 27(3), p.411.

The barriers listed are aspects of farmers' markets are of the type that disproportionately affect those with lower incomes or characteristics of those with lower incomes, such as lack of automobile or long working hours. Moreover, this list was compiled from responses by people who already visit farmers' markets. As a result, it can arguably be assumed that these barriers are even more prevalent among those who did not attend, could not attend, or did not know about the farmers' market.

Overall Barriers

From the results of these three studies (in Michigan, Kentucky and Toronto, Canada) on barriers to farmers' market use, the following general barriers are identified:

- Limited days and hours of operation
- Location of farmers' markets is inconvenient or inaccessible

- Prices and ability to utilize food assistance programs

These barriers, among others, restrict farmers' market usage from the general public to specific groups able to overcome the barriers. As a result, these specific issues should be kept in mind in particular when planning, establishing and maintaining new or existing farmers' markets, discussed more in Chapter 6.

5 Data and Analysis

The Data and Analysis Chapter of this report is organized into three sections. The first section is an explanation of the research approach and objectives for the data derived from the USDA, the Michigan Population Studies Center and the US Census Bureau. The second chapter examines farmers' market presence and income data at the zip code level. The third chapter examines farmers' market presence and income data at the state and region level.

5.1 Research Approach

With the five overall research questions in mind, two main data analysis objectives were formed.

1. By Zip Code

The first objective was to examine current farmers' market presence against median and mean income levels on a zip code basis. This analysis narrows in on the smallest possible researchable geographic unit: the zip code level. The data is analyzed using measures of central tendency and histogram analysis on a combination of USDA Farmers' Market Survey Data and economic listings by zip code. This correlation, if any, will establish a correlation between level of income as it indicates presence of farmers' markets.

2. By State & Region

The second objective was to examine current farmers' market presence against median and mean income levels and poverty levels on a statewide and regional basis. Using farmers' markets per 100,000 people in comparison with economic data by state will establish a correlation between level of income and service level of farmers' markets by state and region of the United States.

5.2 By Zip Code

Analyzing farmers' market frequency at the zip code level is useful because zip code is the smallest, and therefore most precise, geographic unit that the utilized datasets were organized by. Using zip codes to

examine prevalence of farmers' markets allows for a "zoomed in" look at how mean and median income levels are associated with farmers' markets locations. Zip codes level analysis is also useful because they describe location within states and regions of the United States. In general, zip codes are distributed counting up, with the East Coast having the lowest zip codes and the West Coast having the highest zip codes. For example, the lowest zip code with a recorded farmers' market is 01002 is located in Amherst, Massachusetts and the highest zip code with a recorded farmers' market is 99835 located in Sitka, Alaska.

The following farmers' market data is examined using a zip code level lens. **Table 5.1** through **Table 5.4** and **Figure 5.1** through **Figure 5.4** display the prevalence and distribution of farmers' markets compared to median and mean incomes in those zip codes.

Data Sources

The data used for analysis of income level's ties with presence of farmers markets on the zip code level came from the following sources:

- National Farmers' Market Directory from the Agricultural Marketing Service
- Median Household Income 2006-2010 Dataset (with median income, mean income and population size per zip code) from the Michigan Population Studies Center

Data

The zip code level data is based on the 32,634 zip codes in the United States with economic data available. **Table 5.1** shows farmers' market status by zip code, the total counts of which lead to the examination and comparison in this section on zip codes by income ranges.

Table 5.1 Farmers' Market Status by Zip Code	
Zip Codes with Farmers' Markets	6,527
Zip Codes with Farmers' Markets without Economic Information	21

Zip Codes without Farmers Markets	26,128
Total Zip Codes	32,634

Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015).

The 6,527 zip codes that contain one or more farmers' markets have different characteristics than the 26,128 zip codes that do not contain farmers' markets. The zip codes that contain one or more farmers' markets also have different characteristics than characteristics of all zip codes in the United States. Every zip codes examined in this report reports a median income and a mean income. These values were then examined in the following groups:

- Zip Codes with Farmers' Markets
- Zip Codes without Farmers' Markets
- All Zip Codes

Once put into these three groupings, each group now had a median "median income", a median "mean income", a mean "median income" and a mean "mean income" as shown in **Table 5.2**.

Table 5.2 Overall Median and Mean Incomes by Zip Code Market Status					
	Zip Codes with Farmers' Markets	Zip Codes without Farmers' Markets	Percentage Difference between Zip Codes with Farmers' Markets to Without Farmers' Markets	All Zip Codes	Percentage Difference between Zip Codes with Farmers' Markets to All Zip Codes
Median "Median Income"	\$ 48,696	\$ 46,069	+ 5.40%	\$ 46,503	+ 4.50%
Median "Mean Income"	\$ 60,078	\$ 56,369	+ 6.17%	\$ 56,950	+ 5.21%
Mean "Median Income"	\$ 54,489	\$ 50,053	+ 8.14%	\$ 50,938	+ 6.52%

Mean "Mean Income"	\$ 68,625	\$ 62,162	+ 9.42%	\$ 63,452	+ 7.54%
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Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015).

Particularly notable in this analysis is that in each category, the zip codes with farmers' markets have higher values than zip codes without farmers' markets and the combined all zip code data. The percentage difference for these income characteristics ranges from just over five percent higher to nearly ten percent higher for zip codes with farmers' markets than zip codes without farmers' markets. Higher values is also true when comparing income characteristics for zip codes with farmers' markets to all zip codes, though the margin is smaller here. The percentage difference for the stated characteristics ranges from four and a half percent to seven and a half percent higher for zip codes with farmers' markets to all zip codes.

Table 5.3 groups the median incomes of the zip codes into ranges of \$2000 each. This table shows median income ranges of \$32,000 to \$34,000, having 198 zip codes out of 1149 zip codes having farmers' markets, to the median income range of \$98,000 to \$100,000 having 32 out of 112 zip codes having farmers' markets. **Table 5.3** then displays that the median income range bin of \$32,000 to \$34,000 has 3.56% of the zip codes with farmers' markets and 4.07% of the zip codes of all zip codes. Likewise, the median income range bin of \$98,000 to \$100,000 has 0.57% of the zip codes with farmers' markets and 0.40% of the zip codes of all zip codes.

Table 5.3 Zip Codes by Median Income Range in Relation to Presence of Farmers' Markets

Median Income Bin (the row is listed by upper limit of \$2000 range)	Number of Zip Codes with Farmers' Markets	Number of Total Zip Codes	Percentage of Zip Codes with Farmers' Markets in this Median Income Bin	Percentage of Total Zip Codes in this Median Income Bin	Percentage Difference (How Much/Less Likely that Zip Codes in Income Range Have Farmers' Markets)
\$ 32,000					
\$ 34,000	198	1149	3.56%	4.07%	-0.51%
\$ 36,000	276	1455	4.96%	5.15%	-0.20%
\$ 38,000	314	1725	5.64%	6.11%	-0.47%
\$ 40,000	320	1887	5.75%	6.69%	-0.94%
\$ 42,000	372	2124	6.68%	7.52%	-0.84%
\$ 44,000	357	2094	6.41%	7.42%	-1.01%
\$ 46,000	349	2006	6.27%	7.11%	-0.84%
\$ 48,000	337	1738	6.05%	6.16%	-0.10%
\$ 50,000	289	1712	5.19%	6.07%	-0.87%
\$ 52,000	254	1485	4.56%	5.26%	-0.70%
\$ 54,000	236	1343	4.24%	4.76%	-0.52%
\$ 56,000	189	1132	3.40%	4.01%	-0.62%
\$ 58,000	197	1107	3.54%	3.92%	-0.38%
\$ 60,000	159	829	2.86%	2.94%	-0.08%
\$ 62,000	161	790	2.89%	2.80%	0.09%
\$ 64,000	156	661	2.80%	2.34%	0.46%
\$ 66,000	135	592	2.43%	2.10%	0.33%
\$ 68,000	126	530	2.26%	1.88%	0.39%
\$ 70,000	131	483	2.35%	1.71%	0.64%
\$ 72,000	105	407	1.89%	1.44%	0.44%
\$ 74,000	113	387	2.03%	1.37%	0.66%

\$	76,000	103	343	1.85%	1.22%	0.63%
\$	78,000	86	337	1.54%	1.19%	0.35%
\$	80,000	96	261	1.72%	0.92%	0.80%
\$	82,000	73	245	1.31%	0.87%	0.44%
\$	84,000	59	240	1.06%	0.85%	0.21%
\$	86,000	68	218	1.22%	0.77%	0.45%
\$	88,000	65	195	1.17%	0.69%	0.48%
\$	90,000	54	162	0.97%	0.57%	0.40%
\$	92,000	55	143	0.99%	0.51%	0.48%
\$	94,000	39	119	0.70%	0.42%	0.28%
\$	96,000	33	107	0.59%	0.38%	0.21%
\$	98,000	30	108	0.54%	0.38%	0.16%
\$	100,000	32	112	0.57%	0.40%	0.18%
Total		6,508	28,226			

Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015).

Figure 5.1 depicts the data in **Table 5.3**, showing the percentage of zip codes with farmers' markets out of all zip codes by median income range. As can be seen in **Figure 5.1**, as median income increases, so does the percentage of zip codes with farmers' markets out of the total zip codes for that range.

Figure 5.1 Percentage of Zip Codes with Farmers' Markets out of All Zip Codes in Median Income Ranges

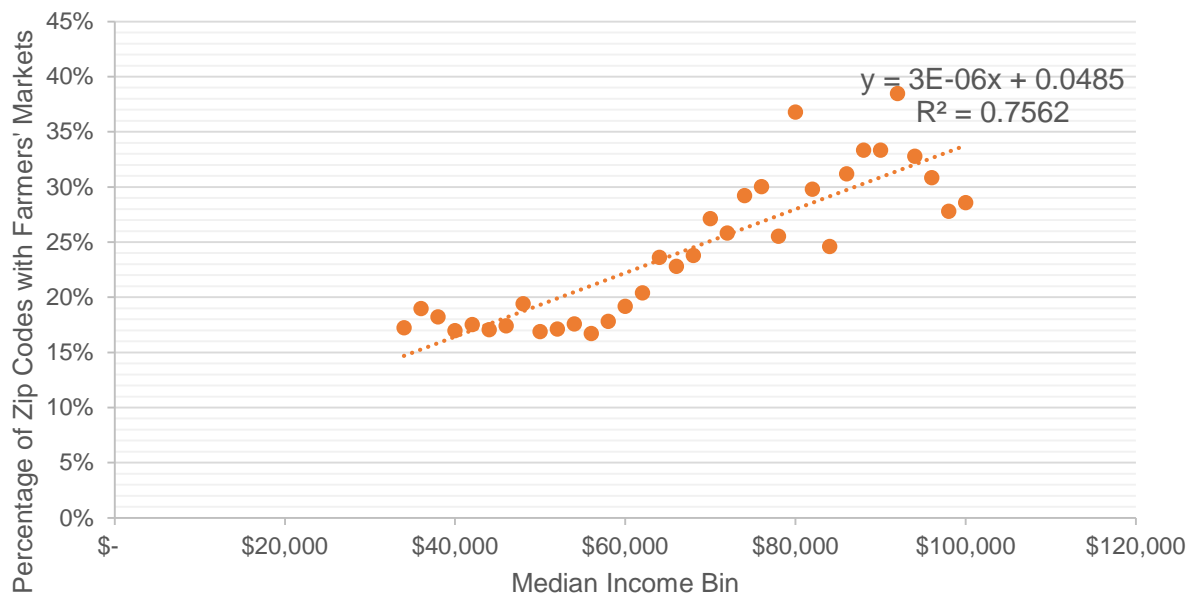


Figure 5.1 Percentage of Zip Codes with Farmers' Markets out of All Zip Codes in Median Income Ranges. Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015).

The line of best fit in this case is $y = 0.000003x + 0.0485$ with an R^2 value of 0.7562. An R^2 of 0.7562 shows that the data fits this linear regression line closely. Here, the regression model accounts for 75.62% of the variance in the data. The correlation coefficient for this relationship, percentage of zip codes with farmers' markets out of total farmers' markets by income range is 0.870. This high correlation coefficient indicates that there is a strong linear association between median income level and prevalence of farmers' markets in those zip codes.

The last column of **Table 5.3** shows that the relationship between percentage of zip codes with farmers' markets to percentage of all zip codes goes from more negative to more positive as median income bins increase from \$32,000 to \$34,000 to finally \$98,000 to \$100,000. This relationship is shown graphically in **Figure 5.2**.

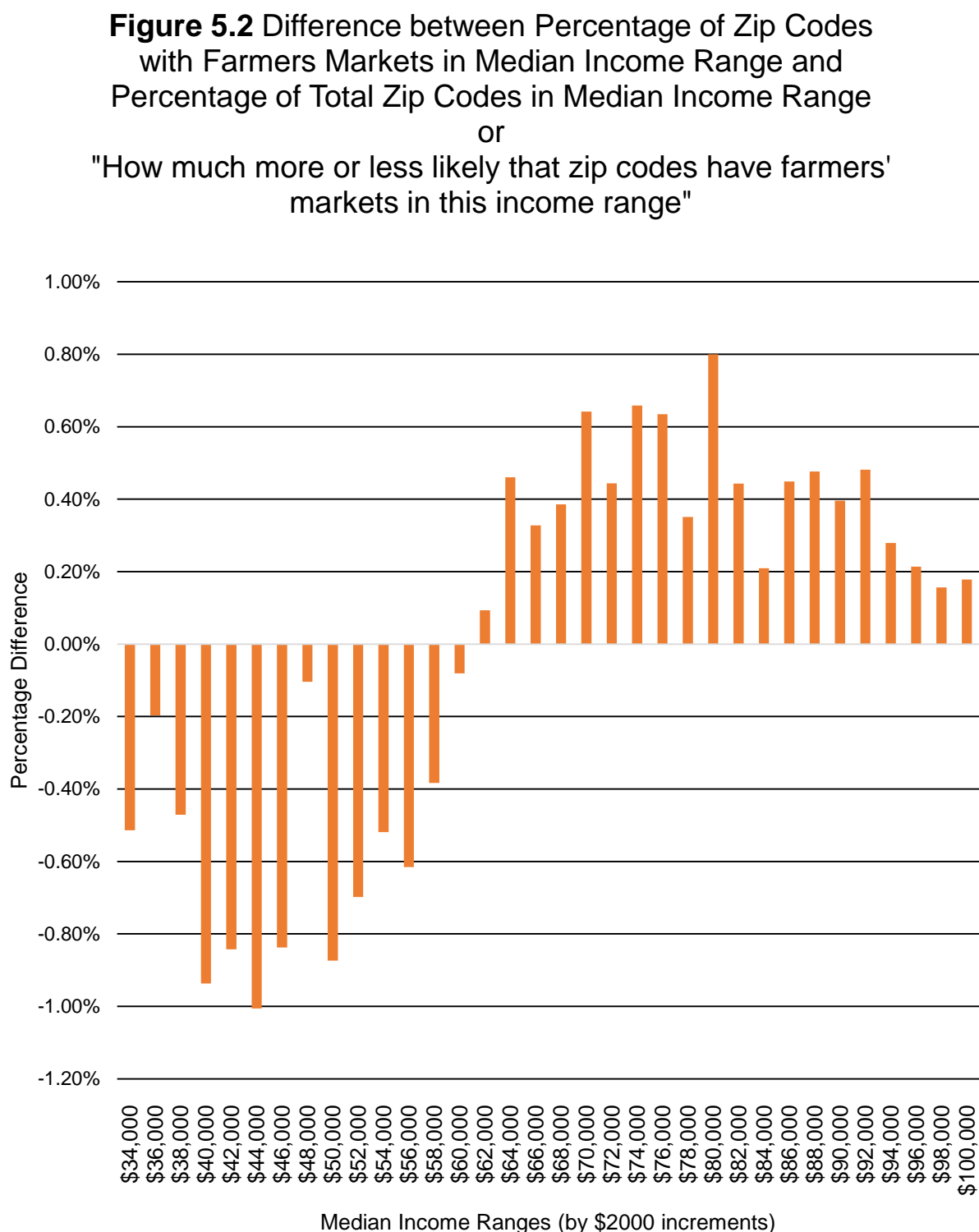


Figure 5.2 Difference between Percentage of Zip Codes with Farmers' Markets in Median Income Range and Percentage of Total Zip Codes in Median Income Range. *Note.* From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015.

As can be seen in **Figure 5.2**, there is a point at between the \$58,000 to \$60,000 median income bin to the \$60,000 to \$62,000 bin where the difference between percentage of zip codes with farmers' markets in income range and the percentage of all zip codes contained in the income range switches from negative to positive. It is at this median income range and higher that the likelihood that the income range has a higher percentage of zip codes with farmers' markets than percentage of all zip codes, or it is more likely that there is a farmers' market in the zip codes that fall in this range. The correlation coefficient for this relationship is 0.753, indicating a strong linear association between median income level and likelihood of farmers' markets in zip codes.

Table 5.4 displays number of zip codes with farmers' markets by mean income bins, opposed to **Table 5.3**, which displayed number of zip codes with farmers' markets by median income bins.

Table 5.4 Zip Codes by Mean Income Range in Relation to Presence of Farmers' Markets					
Median Income Bins (the row is listed by upper limit of \$2000 range)	Number of Zip Codes with Farmers' Markets	Number of Total Zip Codes	Percentage of Zip Codes with Farmers Markets in this Mean Income Bin	Percentage of Total Zip Codes in this Mean Income Bin	Percentage Difference (How Much/Less Likely that Zip Codes in Income Range Have Farmers' Markets)
\$ 34,000	46	1149	0.71%	4.07%	-3.36%
\$ 36,000	64	1455	0.98%	5.15%	-4.17%
\$ 38,000	75	1725	1.15%	6.11%	-4.96%
\$ 40,000	120	1887	1.84%	6.69%	-4.84%
\$ 42,000	152	2124	2.34%	7.52%	-5.19%
\$ 44,000	193	2094	2.97%	7.42%	-4.45%
\$ 46,000	244	2006	3.75%	7.11%	-3.36%
\$ 48,000	311	1738	4.78%	6.16%	-1.38%
\$ 50,000	321	1712	4.93%	6.07%	-1.13%
\$ 52,000	340	1485	5.22%	5.26%	-0.04%
\$ 54,000	339	1343	5.21%	4.76%	0.45%

\$ 56,000	342	1132	5.26%	4.01%	1.24%
\$ 58,000	295	1107	4.53%	3.92%	0.61%
\$ 60,000	272	829	4.18%	2.94%	1.24%
\$ 62,000	238	790	3.66%	2.80%	0.86%
\$ 64,000	234	661	3.60%	2.34%	1.25%
\$ 66,000	197	592	3.03%	2.10%	0.93%
\$ 68,000	174	530	2.67%	1.88%	0.80%
\$ 70,000	176	483	2.70%	1.71%	0.99%
\$ 72,000	159	407	2.44%	1.44%	1.00%
\$ 74,000	135	387	2.07%	1.37%	0.70%
\$ 76,000	132	343	2.03%	1.22%	0.81%
\$ 78,000	116	337	1.78%	1.19%	0.59%
\$ 80,000	106	261	1.63%	0.92%	0.70%
\$ 82,000	126	245	1.94%	0.87%	1.07%
\$ 84,000	96	240	1.48%	0.85%	0.62%
\$ 86,000	90	218	1.38%	0.77%	0.61%
\$ 88,000	77	195	1.18%	0.69%	0.49%
\$ 90,000	92	162	1.41%	0.57%	0.84%
\$ 92,000	75	143	1.15%	0.51%	0.65%
\$ 94,000	81	119	1.24%	0.42%	0.82%
\$ 96,000	51	107	0.78%	0.38%	0.40%
\$ 98,000	60	108	0.92%	0.38%	0.54%
\$ 100,000	63	112	0.97%	0.40%	0.57%
Total	6508	28,226			

Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015.

Figure 5.3 Percentage of Zip Codes with Farmers' Markets out of All Zip Codes in Mean Income Ranges



Figure 5.3 Percentage of Zip Codes with Farmers' Markets out of All Zip Codes in Mean Income Ranges. Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015.

The line of best fit in this case is $y = 0.000008x + 0.2271$ with an R^2 value of 0.7562. An R^2 of 0.912 shows that the data fits this linear regression line closely. Here, the regression model accounts for 91.2% of the variance in the data. The correlation coefficient for this relationship, percentage of zip codes with farmers' markets out of total farmers' markets by income range is 0.955. This high correlation coefficient indicates that there is a strong linear association between mean income level and prevalence of farmers' markets in those zip codes.

The last column of **Table 5.4** shows that the relationship between percentage of zip codes with farmers' markets to percentage of all zip codes goes from more negative to more positive as mean income bins increase from \$32,000 to \$34,000 to finally \$98,000 to \$100,000. This relationship is shown graphically in **Figure 5.4**.

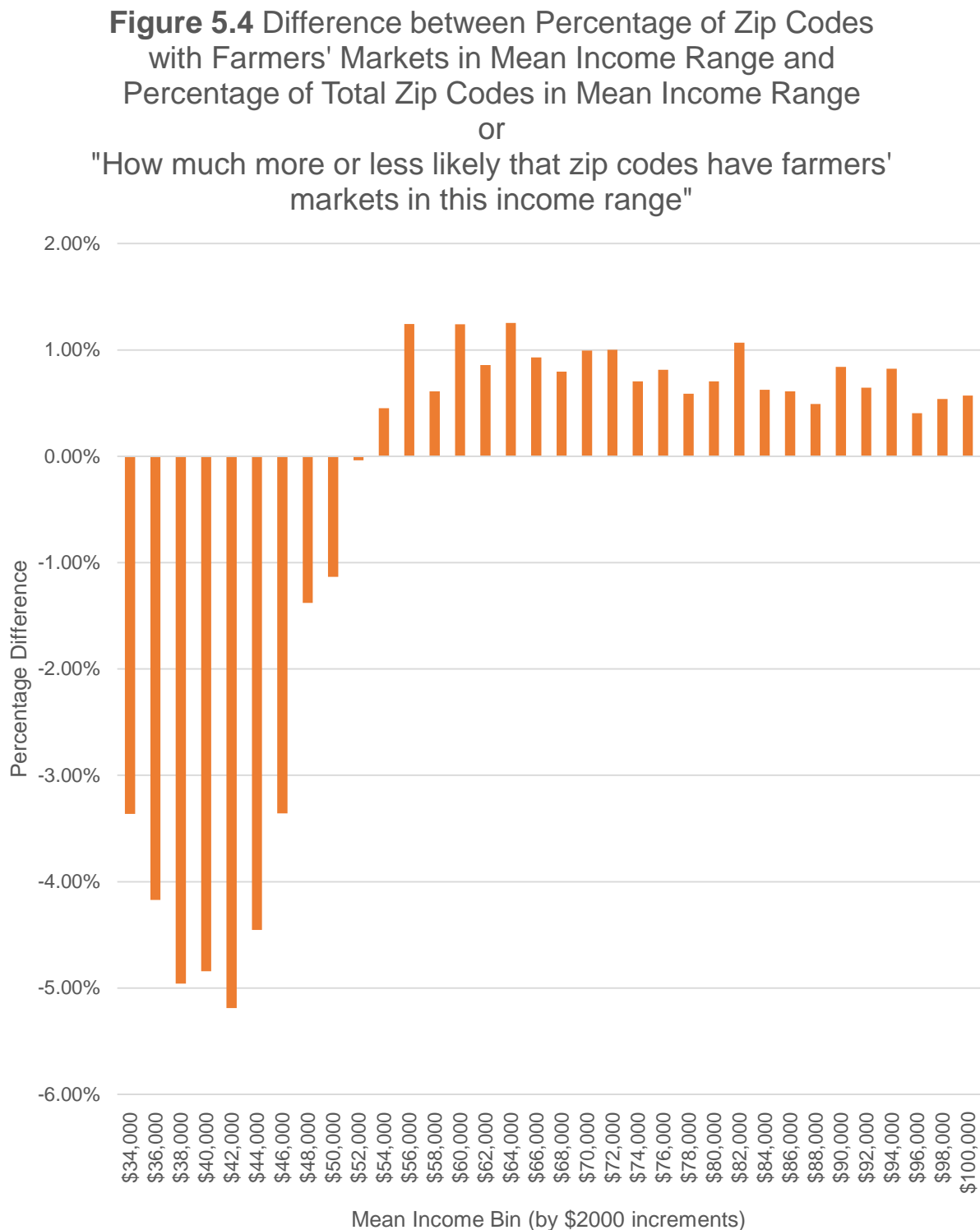


Figure 5.4 Difference between Percentage of Zip Codes with Farmers' Markets in Mean Income Range and Percentage of Total Zip Codes in Mean Income Range. *Note.* From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Median Household Income 2006-2010" by Michigan Population Studies Center, 2015.

Similar to **Figure 5.2**, **Figure 5.4** shows a strong correlation between income level and farmers' market presence in zip codes. When using mean income bins, the shifting point between negative and positive percentage difference between zip codes with farmers' markets in income range and all zip codes is between the \$50,000 to \$52,000 bin and the \$52,000 and \$54,000. It is at this mean income range and above that the likelihood of a higher percentage of zip codes with farmers' markets than percentage of all zip codes shifts from negative to positive. Said differently, around a mean income level of around \$52,000, it becomes more likely that zip codes have one or more farmers' markets. With a correlation coefficient of 0.726, mean income level and likelihood of farmers' markets in zip codes is strongly correlated.

When using median income levels in **Figure 5.2** versus the mean income levels in **Figure 5.4**, a interesting finding presented itself. The shifting point from a negative difference to a positive difference between percentage of zip codes with farmers' markets in income ranges to percentage of total zip codes in income ranges was significantly lower for mean incomes than for median incomes. This indicates that in places where income is raised up by high outliers (using mean), the likelihood of farmers' markets existing in those zip codes is high.

5.3 By State & Region

Analyzing farmers' market prevalence at the state and region level is useful because it provides distributional relevance to the correlation between median income, mean income, and poverty prevalence to frequency of farmers' markets.

The following farmers' market data is examined by state and corresponding region. **Table 5.5** and **Table 5.6** and **Figure 5.5** through **Figure 5.10** display the prevalence and distribution of farmers' markets compared to median, mean, and poverty level in the 50 states plus Washington D.C.

Data Sources

The data used for analysis of income level's correlation to farmers' markets per 100,000 people is now established on the statewide level. In addition, poverty level by state is compared to farmers' markets by 100,000 people, and percentage of people living in zip codes with farmers' markets is shown by state. Additional information about median income, mean income, and people in poverty came from the following sources:

- Total Population Table from the United States Census Bureau/American FactFinder
- Mean Income in the Past 12 Months Table from the United States Census Bureau/American FactFinder
- Median Income in the Past 12 Months Table from the United States Census Bureau/American FactFinder
- Poverty Status in the Past 12 Months Table from the United States Census Bureau/American FactFinder

Data

Table 5.5 displays ranking of the states and Washington D.C. by their farmers' market "service level", measured by farmers' markets per 100,000 people.

Table 5.5 Farmers' Markets Service Level by State and Rank			
Rank	Region	State	Farmers' Markets per 100,000 people
1	Northeast	Vermont	15.34
2	Midwest	North Dakota	9.13
3	Midwest	Iowa	7.48
4	Northeast	New Hampshire	7.35
5	West	Wyoming	7.19

6	West	Hawaii	6.98
7	Northeast	Maine	6.93
8	West	Montana	6.81
9	Southeast	DC	5.65
10	Northeast	Rhode Island	5.51
11	Midwest	Nebraska	5.32
12	Midwest	Wisconsin	5.24
13	Southeast	West Virginia	4.86
14	Midwest	South Dakota	4.73
15	West	Alaska	4.58
16	Northeast	Massachusetts	4.57
17	West	Oregon	4.45
18	Northeast	Connecticut	4.38
19	West	Idaho	4.23
20	Midwest	Missouri	4.21
21	Midwest	Minnesota	3.52
22	Midwest	Kansas	3.49
23	Midwest	Michigan	3.44
24	Northeast	New York	3.32
25	Southeast	Arkansas	3.27
26	Southwest	New Mexico	3.24
27	West	Colorado	3.11
28	Southeast	Kentucky	3.07
29	Southeast	Virginia	3.02
30	Southeast	Delaware	2.97
31	Southeast	Alabama	2.94
32	Southeast	Mississippi	2.82

33	Midwest	Indiana	2.76
34	Southeast	South Carolina	2.69
35	Midwest	Ohio	2.68
36	Northeast	Maryland	2.57
37	Southeast	North Carolina	2.54
38	West	Washington	2.52
39	Midwest	Illinois	2.50
40	Northeast	Pennsylvania	2.37
41	West	California	2.00
42	Southeast	Tennessee	1.94
43	Southwest	Oklahoma	1.82
44	Northeast	New Jersey	1.66
44	Southeast	Louisiana	1.66
46	Southeast	Georgia	1.45
47	West	Nevada	1.43
48	West	Utah	1.42
49	Southwest	Arizona	1.37
50	Southeast	Florida	1.31
51	Southwest	Texas	0.79

Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by *United States Census Bureau/American FactFinder. 2009-2013.*

As can be seen in **Table 5.5**, the state ranked first in farmers' market service level is Vermont, located in the Northeast region, with a farmers' markets per 100,000 people value of 15.34. The state ranked last in farmers' market service level is Texas, located in the Southwest, with a farmers' markets per 100,000 people value of 0.79. The regional trends of first and last ranks are supported by **Figure 5.5** and **Figure 5.6**, which show the states in the top half of the ranking (1-25) and the states in the bottom half of the ranking (26-51) by percentage of the region falling in these categories. The median farmers' markets per

100,000 people value is 3.24, the value of the 26th ranked state, New Mexico, located in the Southwest, beginning the bottom half section of the rankings. The mean farmers' markets per 100,000 people is 3.93, which ranked states 1-20 exceed. This value is likely brought up by Vermont's farmers' market service level, 15.34, an outlier in comparison to the rest of the states. The second highest service level value is 9.13, held by North Dakota, located in the Midwest.

Figure 5.5 Top Half Farmers' Market Service Level Breakdown, by Number of States in Regions

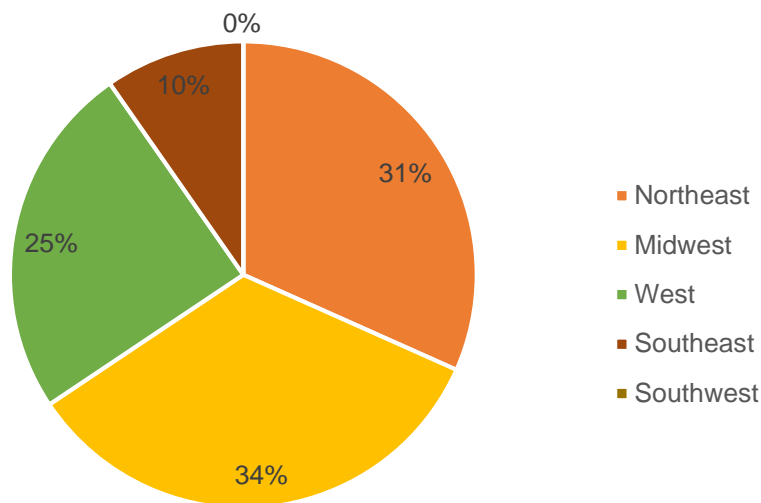


Figure 5.5 Top Half Farmers' Market Service Level Breakdown, by Number of States in Regions.

Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013.

Figure 5.5 Bottom Half Farmers' Market Service Level Breakdown, by Number of States in Regions

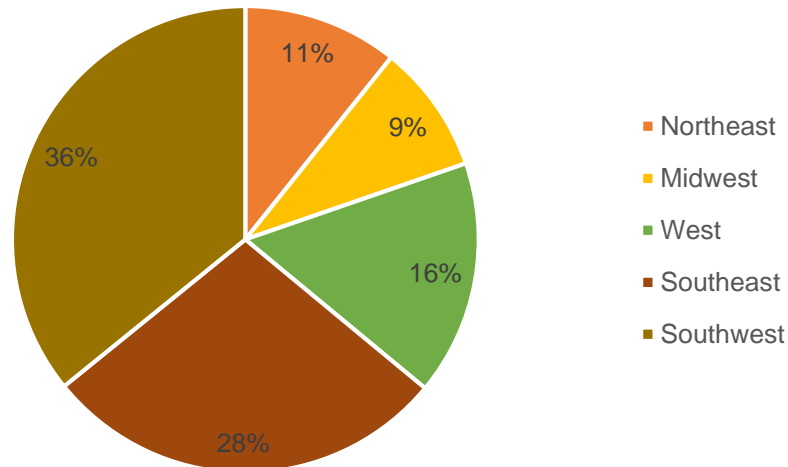


Figure 5.6 Bottom Half Farmers' Market Service Level Breakdown, by Number of States in Regions. *Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013.*

As seen in **Figure 5.5**, the percentage of Midwest states that are in the top half of farmers' market service level ranking is the highest, and the percentage of Southwest states that are in the top half is the lowest:

1. Midwest Region has 9 out of 12 states in the top half (75%)
2. Northeast Region has 7 out of 10 states in the top half (70%)
3. West Region has 6 out of 11 states in the top half (55%)
4. Southeast Region has 3 out of 14 states in the top half (21%)
5. Southwest Region has 0 out of 4 states in the top half (0%)

As seen in **Figure 5.6**, the percentage of Southwest states that are in the bottom half of the farmers' market level states ranking is the highest, and the percentage of Midwest states that are in the bottom half is the lowest:

1. Southwest Region has 4 out of 4 states in the top half (100%)

2. Southeast Region has 11 out of 14 states in the top half (79%)
3. West Region has 5 out of 11 states in the top half (45%)
4. Northeast Region has 3 out of 10 states in the top half (30%)
5. Midwest Region has 3 out of 12 states in the top half (25%)

Table 5.6 displays statewide data on median income, mean income, poverty levels and farmers' market service level by state and region of the United States.

Table 5.6 Median Income, Mean Income, Poverty Levels in Relation to Farmers' Market Service Levels by State					
Region	State	State Median Income	State Mean Income	State Percentage of population in poverty in the last 12 months	State Farmers' Markets per 100,000 people
Midwest	Illinois	\$ 56,797	\$ 77,660	14%	2.50
	Indiana	\$ 48,248	\$ 62,988	15%	2.76
	Iowa	\$ 51,843	\$ 66,136	12%	7.48
	Kansas	\$ 51,332	\$ 68,051	14%	3.49
	Michigan	\$ 48,411	\$ 64,753	17%	3.44
	Minnesota	\$ 59,836	\$ 77,204	12%	3.52
	Missouri	\$ 47,380	\$ 63,756	16%	4.21
	Nebraska	\$ 51,672	\$ 67,023	13%	5.32
	North Dakota	\$ 53,741	\$ 70,235	12%	9.13
	Ohio	\$ 48,308	\$ 64,449	16%	2.68

	South Dakota	\$ 49,495	\$ 64,133	14%	4.73
	Wisconsin	\$ 52,413	\$ 67,448	13%	5.24
Northeast	Connecticut	\$ 69,461	\$ 97,650	10%	4.38
	Maine	\$ 48,453	\$ 63,143	14%	6.93
	Maryland	\$ 73,538	\$ 96,072	10%	2.57
	Massachusetts	\$ 66,866	\$ 90,877	11%	4.57
	New Hampshire	\$ 64,916	\$ 82,935	9%	7.35
	New Jersey	\$ 71,629	\$ 97,225	11%	1.66
	New York	\$ 58,003	\$ 84,432	15%	3.32
	Pennsylvania	\$ 52,548	\$ 71,088	13%	2.37
	Rhode Island	\$ 56,361	\$ 75,749	14%	5.51
	Vermont	\$ 54,267	\$ 69,716	12%	15.34
Southeast	Alabama	\$ 43,253	\$ 59,631	19%	2.94
	Arkansas	\$ 40,768	\$ 55,749	19%	3.27
	Delaware	\$ 59,878	\$ 77,915	12%	2.97
	DC	\$ 65,830	\$ 101,076	19%	5.65
	Florida	\$ 46,956	\$ 66,368	16%	1.31
	Georgia	\$ 49,179	\$ 67,572	18%	1.45
	Kentucky	\$ 43,036	\$ 58,621	19%	3.07

	Louisiana	\$ 44,874	\$ 62,773	19%	1.66
	Mississippi	\$ 39,031	\$ 54,132	23%	2.82
	North Carolina	\$ 46,334	\$ 63,707	18%	2.54
	South Carolina	\$ 44,779	\$ 60,601	18%	2.69
	Tennessee	\$ 44,298	\$ 61,291	18%	1.94
	Virginia	\$ 63,907	\$ 87,094	11%	3.02
	West Virginia	\$ 41,043	\$ 55,308	18%	4.86
Southwest	Arizona	\$ 49,774	\$ 66,971	18%	1.37
	New Mexico	\$ 44,927	\$ 61,682	20%	3.24
	Oklahoma	\$ 45,339	\$ 61,481	17%	1.82
	Texas	\$ 51,900	\$ 72,474	18%	0.79
West	Alaska	\$ 70,760	\$ 87,235	10%	4.58
	California	\$ 61,094	\$ 85,408	16%	2.00
	Colorado	\$ 58,433	\$ 78,383	13%	3.11
	Hawaii	\$ 67,402	\$ 84,933	11%	6.98
	Idaho	\$ 46,767	\$ 60,192	16%	4.23
	Montana	\$ 46,230	\$ 60,639	15%	6.81
	Nevada	\$ 52,800	\$ 69,629	15%	1.43
	Oregon	\$ 50,229	\$ 66,666	16%	4.45

	Utah	\$ 58,821	\$ 73,717	13%	1.42
	Washington	\$ 59,478	\$ 77,827	13%	2.52
	Wyoming	\$ 57,406	\$ 71,081	12%	7.19

Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013 & From "Poverty Status in the Past 12 Months", [Table] by United States Census Bureau/American FactFinder. 2009-2013 & From "Mean Income in the Past 12 Months", [Table] by United States Census Bureau/American FactFinder. 2009-2013 & From "Median Income in the Past 12 Months", [Table] by United States Census Bureau/American FactFinder. 2009-2013.

Figure 5.7 displays statewide farmers' market service level by region of the United States and **Figure 5.8** through **Figure 5.10** depict the relationships between farmers' market service level with statewide median income, statewide mean income, and statewide poverty level respectively.

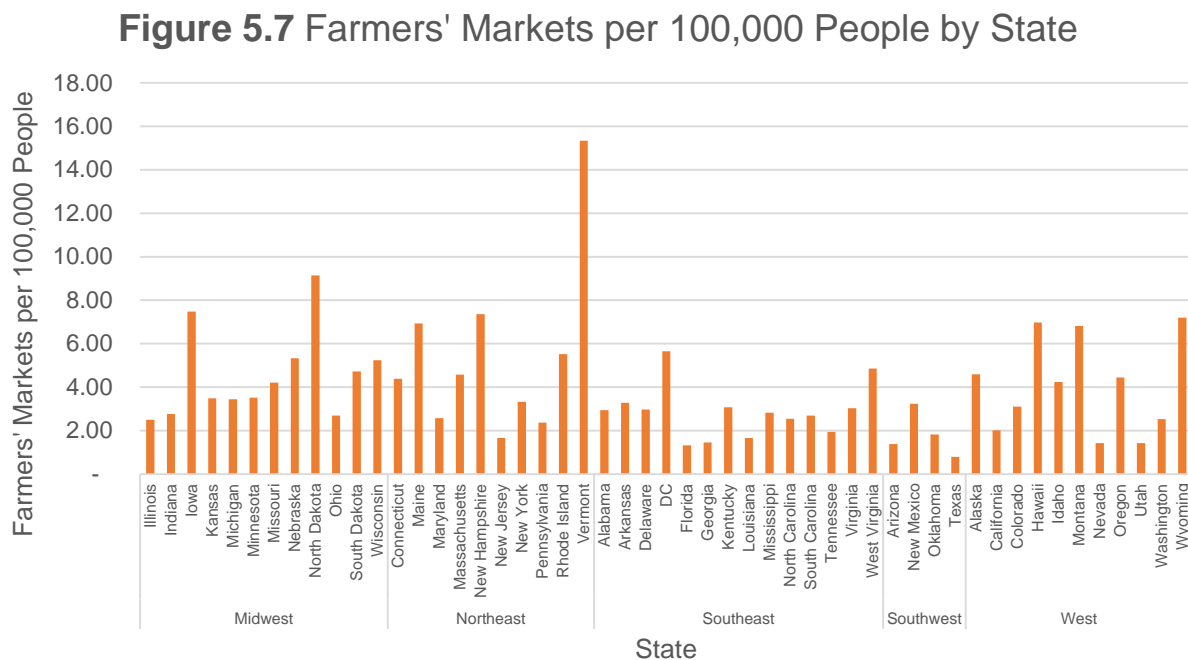


Figure 5.7 Farmers' Markets per 100,000 People by State. Note. From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013.

Figure 5.8 Statewide Farmers' Markets per 100,000 People By Statewide Median Income

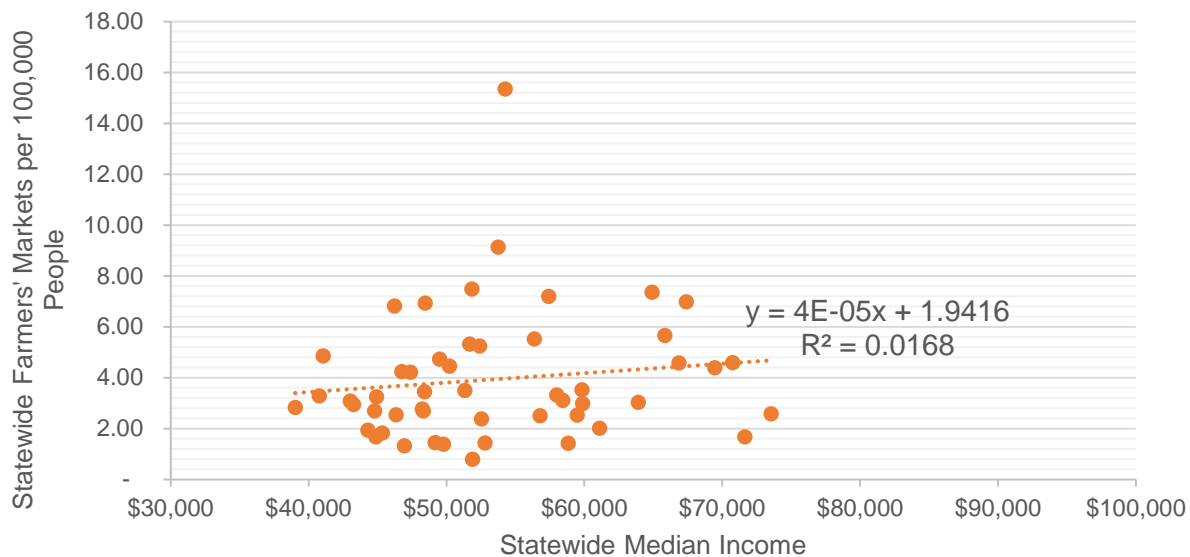


Figure 5.8 Statewide Farmers' Markets per 100,000 People by Statewide Income. *Note.* From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013 & From "Median Income in the Past 12 Months (in 2013 Inflation-Adjusted Dollars)" by United States Census Bureau/American FactFinder. 2009-2013.

Figure 5.9 Statewide Farmers' Markets per 100,000 People By Statewide Mean Income



Figure 5.9 Statewide Farmers' Markets per 100,000 People by Statewide Mean Income. *Note.* From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013 & From "Mean Income in the Past 12 Months (in 2013 Inflation-Adjusted Dollars)" by United States Census Bureau/American FactFinder. 2009-2013.

Figure 5.10 Statewide Farmers' Markets per 100,000 People By Percentage of Population in Poverty

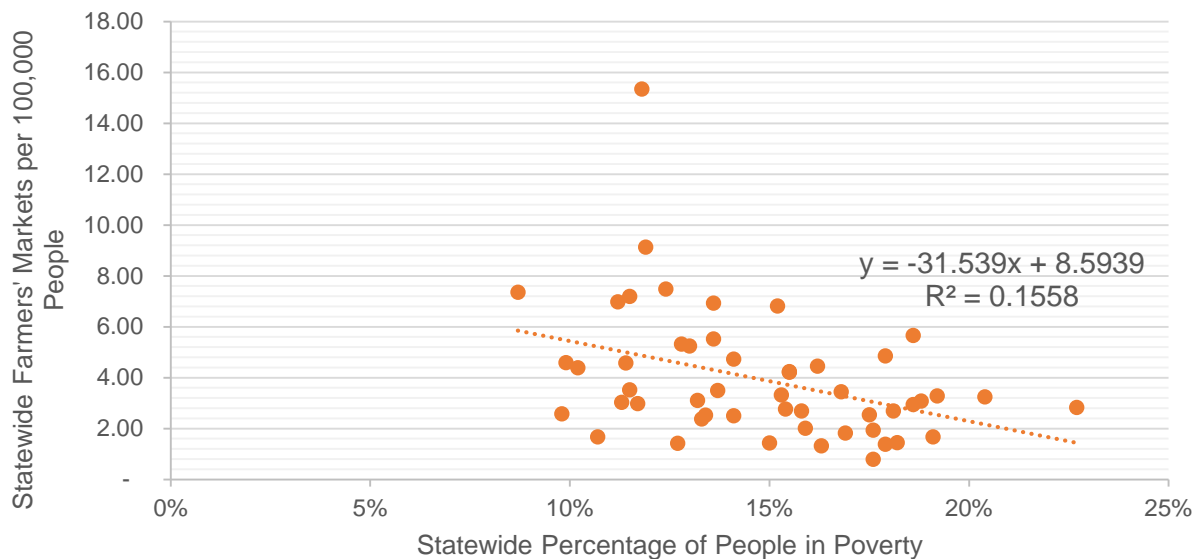


Figure 5.10 Statewide Farmers' Markets per 100,000 People by Percentage of Population in Poverty. *Note.* From "National Farmers' Market Directory" by Agricultural Marketing Service, 2015, USDA & From "Total Population" by United States Census Bureau/American FactFinder. 2009-2013 & From "Poverty Status in the Past 12 Months" by United States Census Bureau/American FactFinder. 2009-2013.

The line of best fit in **Figure 5.8**, "Statewide Farmers' Markets per 100,000 People By Statewide Median Income", is $y = 0.00004x + 1.9416$ with an R^2 value of 0.0168. An R^2 of 0.0168 shows that the data does not fit this linear regression line closely. Here, the regression model accounts for 1.68% of the variance in the data. The correlation coefficient for this relationship, percentage of zip codes with farmers' markets out of total farmers' markets by income range is 0.130. This correlation coefficient indicates that there is a not an extremely strong linear association between statewide median income level and prevalence of farmers' market service level.

The line of best fit in **Figure 5.9**, "Statewide Farmers' Markets per 100,000 People By Statewide Mean Income", is $y = 0.000008x + 3.3696$ with an R^2 value of 0.0014. An R^2 of 0.0014 shows that the data does not fit this linear regression line closely. Here, the regression model accounts for 0.14% of the variance in the data. The correlation coefficient for this relationship, percentage of zip codes with farmers' markets out of total farmers' markets by income range is 0.037. This correlation coefficient indicates that there is

a not an extremely strong linear association between statewide mean income level and prevalence of farmers' market service level.

The line of best fit in **Figure 5.10**, "Statewide Farmers' Markets per 100,000 People By Percentage of Population in Poverty", is $y = -31.539x + 8.5939$ with an R^2 value of 0.1558. An R^2 of 0.0047 shows that the data does not fit this linear regression line closely. Here, the regression model accounts for 15.58% of the variance in the data. The correlation coefficient for this relationship, percentage of zip codes with farmers' markets out of total farmers' markets by income range is -0.395. This correlation coefficient indicates that there is a linear association between statewide percentage of population in poverty and prevalence of farmers' market service level.

6 Summary and Conclusions

From the literature review and the data analysis presented in this report, it is possible to make two overarching conclusions about the state of farmers' markets in the United States today:

1. The United States currently has a large number of farmers' markets, varying in size, shape and characteristics, but nevertheless farmers' markets. This number is the result of historic fluctuation, but it has been on the upward trend from the 1970s to today. Today's 8,352 farmers' market listings in 6,527 unique zip codes is a leap forward from the 1,755 in 1994 and the 724 farmers' markets in 1946 (Agricultural Marketing Service 2015 & Wann et. Al 1948). As a country, it is safe to say that the number of farmers' markets is high.
2. Though the overall numbers of farmers' markets is high, the distribution of farmers' markets is uneven, on an income level and statewide basis. By income level, this data analysis found that that likelihood of living in a zip code with a farmers' market increased with income level of the zip code, shown by a correlation between these two factors. By state, it was found that number of farmers' markets per 100,000 people, what is called farmers' market service level in this report, varied greatly by state and formed trends by region. The state with the highest farmers' market service level is Vermont, with 15.34 markets per 100,000 people. The state with the lowest farmers' market service level is Texas, with 0.79 farmers' markets per 100,000 people.

Discussion

The farmers' markets of today vary significantly from one to the next, and as a result, perceptions about what a farmers' market is changes person to person. This report defined farmers' markets as: a continuous, seasonal or temporary market at a fixed location made up of first-hand producers offering farm-fresh goods to the general public. However, this report did not analyze each market of the total

number against these standards, rather the definition here provided a framework with which to discuss benefits and issues of farmers' markets today.

The **benefits** for the sellers range from higher profits due to the elimination of middlemen, to premium prices for fast cash-in-hand, to the ability to receive first-hand customer input. The benefits for the buyers include ready availability and increased access to fresh, local food if not organic, for anybody willing and able to visit the market. The community benefits are varied as well, including boosting the local economy, strengthening the community, building food resilience, and improving public health.

The **issues** with farmers' markets today are identified according to the definition of farmers' markets proposed in this report. While the definition directly stipulates that the farmers' market must offer goods to the general public, in some cases, there are barriers to entry resulting in the "typical shopper". In these cases, farmers' markets are geared more towards, the affluent and health-conscious shopper rather than low-income individuals and families most needing the increased fresh food availability. Moreover, the farmers' market may become an "activity" more than a destination for exchange of goods and community socialization. When the farmers' markets becomes more of an event to its users, a great deal of its original purpose fails and it may not measure up against the three measures of success: economic vitality, community building, and particularly improved public health.

The data analysis portion of this report was divided into two parts, zip code analysis and statewide analysis. The findings of the zip code analysis portion indicate that throughout the entire United States, there is an association between higher income levels and presence of farmers' markets. The mean and median income for the zip codes with farmers' markets was significantly higher than zip codes without farmers' markets. Additionally, a high correlation coefficient of 0.756 in one comparison indicated that there is a strong association between median income level and prevalence of farmers' markets.

The findings of the statewide analysis portion of this report showed that prevalence of farmers' markets significantly varied by state and region of the United States. When ranked by farmers' markets per 100,000 people, it became obvious that the Midwest region and the Northeast region had the highest farmers' market service levels. This was especially true when compared to the Southeast and Southwest regions, which consistently contained states with the relatively lower farmers' market service levels. At the statewide level, prevalence of farmers' markets and statewide mean and median income levels were correlated but not to a level of significance. However, farmers' market prevalence was negatively associated with statewide poverty level, with a correlation coefficient of 0.130. As percentage of population below the poverty level went up, the farmers' market service level went down.

Recommendations

Identifying and understanding the inequities in farmers' markets is an important first step for market organizers and city officials to take in evening the distribution of farmers' markets. Those wishing to establish farmers' markets should think of both means to avoid closing and of ways to avoid not measuring up when looking at the measures of success discussed in Section 2.3 of this report: economic viability, strengthening community identity, and improving public health and well-being. Thus success isn't only making the most money, making the most inviting social space, or providing the most produce, but a combination of all of these factors. Ideally, those wishing to establish farmers' markets realize that the United States does not have a problem with number of farmers' markets, but rather the distribution of farmers' markets, and these parties work to level the divide.

When looking to establish an authentic and truly beneficial farmers' market, there are several acting parties involved: the municipal government, market organizers, and the public.

1. In order to ensure **economic vitality** of farmers' markets:

- City officials can contribute and advocate for favorable policies that ensure local economic vibrancy along with appropriate sales for vendors and income for the market as a whole.
 - Market organizers can recruit a lively mix of vendors that attract the community to buy local groceries in favor of other food options that take money out of the local economy.
 - Members of the community can both visit the market to demonstrate commitment to the local community and act as advocates of the market to improve likelihood of success.
2. In order to ensure that markets **build and strengthen the sense of community**:
- City officials can utilize thoughtful land use planning and urban design to encourage the market as a social space in conjunction with a means to exchange goods.
 - Market organizers can require that vendors take a “customer first” perspective providing helpful information and nutrition information, thereby making it a pleasant experience for all involved. Additionally, market organizers can provide amenities such as tables and entertainment at markets to increase amount of time spent at the farmers’ market and increasing chances of socialization.
 - Members of the community can visit the market on a regular basis to establish connections there, as well as volunteer during set-up and take-down to encourage a community sense of ownership of the market.
3. In order to ensure that markets **improve public health and well-being**:
- City officials can encourage the acceptance of food assistance programs at farmers’ markets in their municipality, to promote the use of the market by all groups.
 - Market organizers can advertise and market the farmers’ market as an accessible and friendly place to buy healthy, fresh produce.
 - Members of the community can visit the market and use word-of-mouth advertising to encourage friends, family and other members of the community to visit the farmers’ market.

Implications for Further Research

It was found in this report that income and location of farmers' markets have an impact on the likelihood of farmers' markets and the number of farmers' markets for the population. Given the many factors that may influence farmers' markets in addition to location and income level alone, it may be possible to find other correlations between community characteristics and farmers' markets. The prevalence and distribution of farmers' markets may be affected by other factors such as race, lifestyle choices, health and obesity rates, or other factors not studied in this report. It is recommended, therefore, that future research identifies and tracks farmers' market growth and changes along the factors studied here, and additional factors as well.

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