The Supplemental Nutrition Assistance Program and Its Effect on Food Insecurity

Clare Cho
Department of Agricultural, Environmental and Development Economics

Mark D. Partridge, Swank Professor of Rural-Urban Policy
Department of Agricultural, Environmental and Development Economics

Swank Program Website: http://aede.osu.edu/programs/swank/

Source: http://oregonsnapcsa.com/info-for-farmers.html

Swank Program in Rural-Urban Policy
Summary and Report May 2014
**Table of Contents**

1  Executive Summary  
3  Introduction  
4  Overview of SNAP  
8  Support and Criticism of SNAP  
10  SNAP in Ohio  
16  Conclusion  
17  References  
19  Appendix

**Acknowledgements:** We would like to thank Sarada Pyda and Ziyu Guo for their assistance. Any mistakes should not be associated with them but are our own.
The Supplemental Nutrition Assistance Program (SNAP), previously known as the Food Stamp Program, offers nutrition assistance to low-income individuals. Revisions to the program are enacted through the Farm Bill, a comprehensive legislation for federal farm and food policies that is reauthorized every five years. Recently, SNAP has become increasingly controversial; the passage of the most recent Farm Bill was stalled for four years because of disputes over farm subsidies and funding for SNAP (Shear 2014).

There has been growing concern regarding the effectiveness of SNAP as its funding has increased. It is unclear if the program reduces food insecurity, and whether the benefits to society outweigh the potential for individuals to exploit taxpayer money:

- **Food insecurity:** Although the number of SNAP participants has been increasing, the number of food insecure individuals has also been rising in recent years, particularly during this last recession. Some studies find that SNAP reduces the prevalence of food insecurity (e.g. Yen et al. 2008), while others find its effect to be negligible (e.g. Coleman-Jensen, Nord, and Singh 2013). Nevertheless, these studies find that SNAP reduces the severity and depth of food insecurity.

- **Benefits:** In addition to reducing the severity and depth of food insecurity, studies have found that SNAP participation has positive effects on children’s poverty; one study found it improved children’s health outcomes when they become adults (Hynes, Schanzenbach, and Almond 2012). Studies have also shown that SNAP participation has a counter-cyclical response to economic trends; as the economy worsens, participation increases (e.g. Klerman, Danielson, and Ver Ploeg 2009). Proponents often cite this as evidence that SNAP provides assistance during times of economic need and point to how it stimulates the economy.

- **Criticism:** Since SNAP is intended to address food insecurity, critics often cite the negligible effect of participation on food insecurity as evidence that the program has been unsuccessful. Furthermore, as stories of fraud and abuse surface, there has been rising concern that a large portion of individuals are exploiting the program. As a result, policymakers have introduced restrictions to participation and other provisions, although no major reforms were implemented in this last farm bill.

This policy brief also provides a more detailed examination of SNAP in Ohio:

- **SNAP participation:** The trend in SNAP participation in Ohio follows the national trend, with a rapid increase during the last recession in 2008. Although participation increased from 2000 to 2010 in every county, the rate of increase varied widely, with the lowest at 2% and the greatest at 16%. Counties with a large increase in food insecurity also had a large increase in SNAP participation.

- **SNAP authorized stores:** A number of studies have shown that low-income individuals have limited access to grocery stores. To determine whether there is a similar problem with SNAP authorized stores, this study examines their locations in Ohio. There is evidence of clustering in urban areas, particularly in cities with large populations. All counties experienced an increase in SNAP participants; some, such as Franklin County, experienced an increase in the number of SNAP authorized stores, while others, such as Scioto County, experienced a decline. To examine why these contrasting changes occurred, we conduct a case study of both counties.

- **Franklin, Scioto, and Morgan County:** In addition to conducting a closer examination of Franklin and Scioto County, which had contrasting changes in the number of SNAP authorized stores while participation increased, we examine Morgan County because it was one of the five counties with the highest food insecurity in 2010. These case studies illustrate that some of these low-income areas...
have clusters of SNAP authorized stores, while others do not have any. Moreover, according to measurements provided by the Economic Research Service of the U.S. Department of Agriculture, some areas with inadequate access to supermarkets had clusters of SNAP authorized stores. This seemingly contradictory result may be explained by authorized convenience stores or Farmer’s Markets.

This policy brief begins with an overview and a summary of eligibility requirements for individuals and for stores to participate in SNAP.
The first food stamp program was introduced in 1939 and lasted for nearly four years but did not become a permanent program until Congress passed the Food Stamp Act of 1964 (USDA FNS 2013c). It has since become a component of the Farm Bill, which is a comprehensive legislation for federal farm and food policies that is reauthorized approximately every five years (FRAC 2014). In the 2008 Farm Bill, the food stamp program was renamed as the Supplemental Nutrition Assistance Program (SNAP), among other provisions passed in the legislation (USDA FNS 2013b).

In recent decades, one of the largest changes to the SNAP program was the development of the Electronic Benefit Transfer (EBT) system. An individual still applies for benefits at the local food stamp office, but rather than coupons, (s)he receives a plastic card and personal identification number, similar to a bank card. This new system allows individuals to make their purchases with SNAP benefits more discreetly, discussed further in Section II. The Omnibus Budget Reconciliation Act of 1993 encouraged state agencies to develop and implement EBT systems. In 1996, the Personal Responsibility and Work Opportunity Reconciliation Act required states to implement the EBT system by October 1, 2002 (USDA FNS 2013c).

The most recent Farm Bill took four years to finalize, the toughest battle on the renewal of the farm bill in almost two decades (Bjerga 2014). Titled H.R. 2642 Agricultural Act of 2014, the bill was signed by President Obama and enacted on February 7, 2014 (Shear 2014). The initial bill created by the House of Representatives was controversial; it tightened SNAP eligibility standards, such as prohibiting unemployed childless adults from receiving benefits or allowing states to subject every SNAP applicant and recipient to drug testing (Bolen, Rosenbaum, Dean 2014). Some members of Congress claimed that including these restrictive eligibility requirements were “political gamesmanship… blocking us from getting a farm bill” (Nixon Aug. 2013). Proponents of these stricter eligibility standards, mostly Republicans in Congress, claimed that they would provide incentives for individuals to return to work; opponents, mostly Democrats, raised concern about the millions of individuals who would suddenly lose this assistance (Nixon Sept. 2013). The final bill did not include these restrictions, and instead clarified certain eligibility rules, such as ensuring lottery winners and affluent college students are not eligible for SNAP (Bolen, Rosenbaum, Dean 2014). In addition, new provisions were introduced to prevent trafficking, fraud, and misuse of benefits.2

While the Farm Bill was being finalized, SNAP’s effectiveness was widely debated. Despite concern about the millions of low-income Americans who would be affected by the proposed cuts (e.g. Rosenbaum, Dean, and Greenstein 2013), some argued that additional restrictions, such as implementing a work requirement, were needed to prevent individuals from exploiting the program (e.g. Sheffield 2013). This policy brief provides a more detailed review of benefits and criticisms that have been raised over the years in Section III. Section II provides an overview of SNAP, discussing individual eligibility requirements and requirements for a store to receive SNAP benefits. Section IV examines SNAP specifically for Ohio, examining participation rates, store locations, and how the program may affect Ohio residents.

---

SNAP is a federal program that is administered by the Food and Nutrition Service (FNS), an agency in the U.S. Department of Agriculture (USDA). Although FNS works with state agencies, nutrition educators, and neighborhood and faith-based organizations, characteristics of the program are generally consistent across the nation. The eligibility requirements for both individuals and stores, as well as benefit levels for households, are set by FNS with little variation by state; details are discussed below.

A. Eligibility Requirements and Benefit Levels for SNAP Participants

As illustrated in Figure 1, the proportion of SNAP recipients varies extensively. Wyoming had the lowest percentage in June 2011 at 6.3% and the District of Columbia had the highest at 22.1%, closely followed by Mississippi at 21.2%. Despite this variation in the proportion of SNAP participants, the eligibility and benefit levels are uniform across states.

An individual must meet a set of resource and income requirements to be eligible to receive SNAP benefits.3 Households may have $2,000 in countable resources or $3,250 if at least one person is 60 years old or older.4 These countable resources include bank accounts, benefits from other federal welfare programs,5 or most pension plans; home

---

3The eligibility requirements discussed are the federal standards for households in the 48 contiguous states and the District of Columbia. Details for all of these requirements can be found at: http://www.fns.usda.gov/snap/eligibility.

4States can determine whether vehicles are included in this calculation, and if so, how they are calculated.

5Specifically resources received through the Supplemental Security Income (SSI) or Temporary Assistance for Needy Families (TANF).
values are not included in the calculation. Currently, 39 states exclude the value of all vehicles, while 11 states exclude the value of at least one vehicle per household, but include the others if the household has more than one.

Most households have to meet both the gross and net monthly income tests listed in Table 1, but a household with an elderly person or receiving certain types of disability payments only has to meet the net income tests. Before income eligibility is determined, a 20% deduction is taken from earned income and a standard deduction of $152 for households with one to three people and $163 for a household of four. Additional deductions, such as child support payments, are also made before determining eligibility.

In addition to income eligibility, able-bodied adults aged 16 to 60 must be registered to work at least 20 hours a week or participate in an employment and training program. Failure to do so may result in disqualification from the program. Additionally, unemployed able-bodied adults without dependent children (ABAWDs) aged 18 to 50 are only eligible to receive benefits for three months in a 36 month period. A state may request a waiver to this requirement if the unemployment rate is above 10% or if it demonstrates that there are insufficient jobs. Under the American Recovery and Reinvestment Act of 2009, the restriction was lifted for all ABAWDs from April 1, 2009 through September 30, 2010, unless a state chose to impose the work requirement.

Applicants are approved or denied within 30 days, 7 days if their income level is low enough. If an applicant is approved, the individual will receive benefits through their EBT card within this time period. Under the expectation that a household spends approximately 30% of its earnings on food, an individual’s benefit level is determined by multiplying net income by 0.3 and subtracting it from the maximum benefit according to household size, listed in Table 2.

According to Castner and Henke (2011), a survey of SNAP participants found that 21% of households redeemed over three-quarters of their benefits on the day they were distributed, and 53% had done so by the second week; 86% redeemed more than half of their benefits by the second week. This may be partially due to the importance of SNAP benefits for low-income individuals, discussed further in Section II.

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Gross Monthly Income (130% of poverty)</th>
<th>Net Monthly Income (100% of poverty)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$1,245</td>
<td>$958</td>
</tr>
<tr>
<td>2</td>
<td>$1,681</td>
<td>$1,293</td>
</tr>
<tr>
<td>3</td>
<td>$2,116</td>
<td>$1,628</td>
</tr>
<tr>
<td>4</td>
<td>$2,552</td>
<td>$1,963</td>
</tr>
<tr>
<td>5</td>
<td>$2,987</td>
<td>$2,298</td>
</tr>
<tr>
<td>6</td>
<td>$3,423</td>
<td>$2,633</td>
</tr>
<tr>
<td>7</td>
<td>$3,858</td>
<td>$2,968</td>
</tr>
<tr>
<td>8</td>
<td>$4,294</td>
<td>$3,303</td>
</tr>
<tr>
<td>Each additional member</td>
<td>+$436</td>
<td>+$335</td>
</tr>
</tbody>
</table>

Source: USDA Food and Nutrition Service
Standard from October 1, 2013 through September 30, 2014.

---

6 Gross income means household’s total income before deductions have been made. Net income means gross income minus allowable deductions.
7 The standard deduction increases with the number of household members.
9 Gross and net income limit are higher in Alaska and Hawaii.
B. Stores Authorized to Receive SNAP Benefits

There are a number of establishments that may be authorized to receive SNAP benefits, including farmer’s markets, convenience stores, and different types of grocery stores.\textsuperscript{10} For a store to be authorized to receive SNAP benefits, it must meet one of the following criteria:\textsuperscript{11}

1. offer at least three varieties of qualifying food in each of the four staple food groups, with perishables in at least two of the categories: meat, poultry, or fish; bread or cereal; vegetables or fruits; and dairy products
2. over 50\% of the total dollar amount of retail sales is from the four staple food groups

Most of the SNAP authorized stores are convenience stores (79,847 in 2010), as illustrated in Figure 2.\textsuperscript{12} The categories that experienced the greatest increase from 2000 to 2010 were Combination Grocery Stores (increased by 41,293) and Convenience Stores (11,218). Combination Grocery Stores also had one of the largest proportional increases, along with Direct Marketing Farmers and Farmers’ Markets. The significant increase in authorized Farmers’ Markets is partially due to recent efforts to improve access to fresh and healthy food by expanding funding for installations of wireless point-of-sale (POS) terminals (USDA FNS 2012a).

By 2002, states were required to transition SNAP benefit distribution from coupons to an Electronic Benefit Transfer (EBT) system, which requires a POS terminal. An EBT card looks like a debit or credit card and operates the same way: benefits are removed from the cardholder’s account when the transaction occurs and transferred to the store’s account. If an establishment already has a POS terminal, the terminal can be adapted to accept EBT cards at no cost (USDA FNS 2012b). If a POS terminal needs to be installed, the state will supply the equipment without charge as long as the store is expected to have at least $100 each month in sales; otherwise, manual paper vouchers will be provided.\textsuperscript{13} The paper vouchers must be filled out for each transaction. The retailer and cardholder’s name, retailer’s FNS number, and EBT card number are recorded along with an authorization code, which is obtained when the retailer calls the office to ensure there are sufficient funds in the cardholder’s account.

The EBT system was first implemented statewide in Maryland in 1993. An early evaluation of the program conducted by Logan et al. (1994) found that program recipients strongly preferred the new system for its convenience and discretion. This report, along with a study by Mantovani and Olander (2006), found that the EBT system’s ability to record each transaction reduced trafficking, which is when participants sell their benefits to retailers at a discounted rate for cash. Trafficking is a problem that has been, and continues to be, one of the main criticisms of the program.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
Household Size & Maximum Monthly Allotment \\
\hline
1 & $189 \\
2 & $347 \\
3 & $497 \\
4 & $632 \\
5 & $750 \\
6 & $900 \\
7 & $995 \\
8 & $1,137 \\
\hline
\end{tabular}
\caption{Benefit Levels}
\label{table:benefit_levels}
\end{table}

\begin{flushright}
Source: USDA Food and Nutrition Service
Standard from October 1, 2013 through September 30, 2014.
\end{flushright}

\textsuperscript{10}Throughout this brief, any of these establishments will be referred to as a SNAP authorized store.

\textsuperscript{11}Details of these criteria can be found at \url{http://www.fns.usda.gov/snap/retail-store-eligibility-usda-supplemental-nutrition-assistance-program}.

\textsuperscript{12}For the 48 contiguous states and the District of Columbia.

\textsuperscript{13}If the equipment is installed by the state, it will only accept EBT cards.
Figure 2: SNAP Authorized Stores by Store Type

Source: USDA Food and Nutrition Service
*Note: Specialty Food Stores include Bakeries, Fruits/Vegetables, Meat/Poultry, and Seafood Specialty Stores. Other includes Non-Profit Food Buying Co-ops, Direct Marketing Farmers, Delivery Routes, and Farmers’ Markets. Authorized stores located in Military Commissaries and Wholesalers are excluded in the percentage calculations.
SNAP participation has increased substantially since 2000. From 2001 to 2005, the number of SNAP participants increased by almost 50%; the increase was even greater from 2007 to 2011 at nearly 70% (CBO 2012). As a result, federal spending on SNAP benefits has increased from about $30 billion in 2007 to $72 billion in 2011. The budget for the program has grown concurrently with criticism of the program, particularly regarding fraud. Advocates of SNAP argue that the program benefits low-income individuals, for example through its counter-cyclical response to economic trends. This section summarizes the conflicting results of SNAP’s effect on food insecurity and reviews the program’s main benefits and criticisms.

### A. Food Insecurity

Food insecurity has been rising in recent years. A study conducted by Coleman-Jensen, Nord, and Singh (2013) found that 14.5%, or 17.6 million households, were food insecure in 2012, with 7 million of these households considered to have very low food security. Although the study found the change from 2011 to be insignificant, it is a substantial increase from 1999, when 10.1% of households (10.5 million) were considered to be food insecure, with 3% (3.1 million) having very low food security. Aside from a small decline in the mid-2000’s, the percentage of food insecure households have been increasing since 1999, with a significant jump in 2008, most likely due to the economic downturn.

Studies analyzing the effectiveness of SNAP reducing food insecurity have found mixed results, depending on the methodology used in the analysis. Yen et al. (2008) found that participation in the food stamp program reduces food insecurity. Similarly, Ratcliffe et al. (2011) found that SNAP benefits reduced the likelihood of being food insecure by roughly 30% and of being very insecure by 20%.

Other studies have found that SNAP has no effect on food insecurity. Gundersen and Oliveira (2001) found that individuals on food stamps were substantially more likely to be food insecure, even compared to eligible nonparticipants. They found that the Food Stamp Program had no impact on food insecurity: food stamp participants were just as likely to be food insufficient as nonparticipants. Cohen et al (1999) analyzed the responses of SNAP participants from the National Food Stamp Program Survey. They found that 50% of food stamp participants experienced some level of food insecurity while receiving benefits, virtually all because they still lacked financial resources. Wilde and Norde (2005) examined why these conflicting results might occur. They discuss the difficulty of developing a causal impact of food stamps on food security. Since unobserved hardships affect both, it is difficult to distinguish the impact of one on the other.

### B. Benefits of SNAP

Despite the conflicting evidence on the effect of SNAP on the prevalence of food insecurity, there is evidence that SNAP has a positive effect on the severity and depth of poverty. Tiehen et al. (2012) found that SNAP participation led to a substantial decline in the depth (10.3%) and severity (13.2%) of poverty, though it only moderately reduced the prevalence of poverty (4.4%). Mykerezi and Mills (2008) also found strong and consistent evidence that the food stamp program reduces the severity of poverty.

Jolliffe et al. (2005) found similar results specifically regarding child poverty. They found that, although SNAP did not have an effect on the number of children in poverty, it significantly reduced the depth and severity of poverty. There has also been evidence that SNAP has positive effects on the long-run outcomes of children. Hoynes, Schanzenbach, and Almond (2012) found that food stamps led to a significant reduction in obesity, high blood pressure, and diabetes, and an increase in economic self-sufficiency for women.

Furthermore, SNAP participation’s counter-cyclical response to economic trends is often cited as evidence that the program provides assistance to individuals during times of need. As the economy weakens and the number of low-income individuals

---

14 Additional spending for other SNAP-related activities, such as program administration and nutrition education, increased from $4 billion to $6 billion.
rises, SNAP participation increases (Klerman, Danielson, and Ver Ploeg 2009). Ziliak, Gundersen, and Figlio (2003) found that a 1% change in the unemployment rate results in a 2.3% increase in food stamp participation in the following year. This data demonstrates how food stamps provide substantial support to low-income individuals’ food purchases during economic recessions. Although the relationship between SNAP participation and unemployment rate is not clear, Figure 3 illustrates how SNAP participation moves in tandem with the number of low-income individuals.\(^\text{15}\)

**C. Criticisms of SNAP**

Despite these potential benefits of SNAP, criticism of the program has grown, particularly with regard to fraud and abuse. With billions of federal funds being spent on the program, some members of Congress made it their primary objective to incorporate measures in the last farm bill to ensure individuals would not be able to exploit the program. The issue has also been incorporated in other legislation as well. In the House Budget Committee (2012), under Chairman Paul Ryan of Wisconsin, the proposed budget measure for fiscal year 2013 included a proposition to convert SNAP into a state based program. This would have provided states with block grants and made benefit receipt contingent on work and job training, much like the Temporary Assistance for Needy Families program. These adjustments were proposed to reduce dependency on government programs and to reduce fraud.

In 2013, while Congress debated the Farm Bill, Fox News Insider famously released an extended interview with a SNAP recipient exploiting the program: a surfer purchasing high quality food with his benefits while avoiding work. Critics of the program quickly focused on this interview as proof that there are individuals exploiting the program at the expense of hard-earned taxpayer money. Although this report received criticism that this individual was not representative of SNAP recipients (e.g. Dille 2013; Delaney 2013), it is difficult to accurately assess how many individuals exploit the program.

Another concern of the program is the extent of trafficking: when individuals redeem their benefits for a lower amount of cash. A report conducted for FNS found that trafficking has decreased. Estimates from 1999 to 2002 are higher than estimates from 2002 to 2005 (Mantovani and Olander 2006). The report attributes this decline to the transition to the EBT system among other factors. FNS found that trafficking has decreased significantly over the last two decades using the EBT system’s new anti-fraud locator (USDA 2013a). However, stores are only investigated if they exhibit suspicious behavior, which may mean all stores involved with trafficking are not taken into account — these findings likely overestimate the reduction in trafficking. Nonetheless, with over 100 analysts conducting investiga-

\(^{15}\)Although SAIPE approximates the number of SNAP participants using FNS data, there is a similar graph in Tiehen et al. (2012), which uses the number of SNAP participants obtained directly from FNS.
Food insecurity in Ohio has grown substantially over the last ten years. According to a report released by Coleman-Jensen, Nord, Singh (2013), food insecurity has risen from an average of 9.8 percentage points in 2000-2002 to an average of 16.1 percentage points in 2010-2012—a 6.3 percentage point increase. The only two states where food insecurity grew by a larger margin than in Ohio were Nevada and Missouri, which had an increase of 7.3 and 6.8 percentage points, respectively. As a result of these changes, Ohio has jumped from being the 30th most food insecure state to the 10th. Stories of Ohioans struggling to provide food for their families have surfaced (e.g. Candisky 2013a). Using USDA data, Jack Frech, director of the Department of Job and Family Services in Athens County, found approximately 21.01% of SNAP households rely solely on SNAP benefits for groceries (Koff 2014). The rest of this brief conducts an in depth evaluation of SNAP in Ohio, examining recent trends in participation and how the number of authorized stores has been changing. In addition, a more detailed case study is conducted for Franklin, Scioto, and Morgan Counties.

A. Trend for SNAP Participation in Ohio

Although the work requirement has been in place since 1996, Ohio has received a federal waiver exempting Ohioans because of its high unemployment rate (Candisky 2014). In the fall of 2013, Governor Kasich stated that although Ohio still qualified for the waiver, the work requirement would be reinstated beginning on October 1, 2013 in 72 of the 88 counties in Ohio (Provance Candisky 2013b). Individuals residing in the 16 remaining counties will continue to receive benefits without meeting the work requirement. These 16 counties have the highest unemployment rates in Ohio: the two-year average is more than 120% of the national rate (Ohio Department of Job and Family Services 2013; Candisky 2013b). According to Candisky (2014), the work requirement led to more than 10,000 Ohioans losing SNAP benefits in January. Human service officials expect numerous additional SNAP recipients to lose their benefits in February and the following months because thousands did not respond to requests to come to their county Job and Family Services office. Non-respondents were to be expelled from the program in February while

16The 16 counties are: Adams, Brown, Clinton, Coshocton, Highland, Huron, Jefferson, Meigs, Monroe, Morgan, Muskingum, Noble, Ottawa, Perry, Pike, and Scioto. (Ohio Department of Job and Family Services 2013).
County caseworkers continued to work through the caseloads, particularly in urban areas which tend to have larger caseloads.

As illustrated previously in Figure 1, the percentage of individuals receiving SNAP varies across states. In 2010, an estimated 14% of Ohioans received SNAP benefits while the food insecurity rate was 18.1%, over two million individuals (Feeding America 2013).17 The overall trend for the number of SNAP participants in Ohio closely resembles the national trend, as illustrated in Figure 4. Participation by Ohioans peaked around 1992, a year before the national peak. After 1992, participation rates dropped until about 2001, when participation began to increase; a significant increase began in 2009 with the economic recession.

Although food insecurity has been rising over the last decade for all of Ohio, there has been wide variation across counties, as shown through Feeding America’s Map the Meal Gap Project (2013). Similarly, as illustrated in Figure 5, the increase in SNAP participation in Ohio varies by county. The lowest increase occurred in Delaware and Holmes County at 2%, whereas the greatest increase occurred in Vinton County at 16%. Furthermore, counties that faced a 10% or greater increase of SNAP participants (28) outnumber counties that increased by less than 5% (7). Comparing this map to a county-level estimation of food insecurity (Feeding America 2013) suggests that most counties with a higher increase in the proportion of SNAP participants also had a higher level of food insecurity. These results fit criticism that SNAP does not reduce food insecurity, as well as arguments that SNAP reduces the severity of food insecurity but low benefit levels prevent reduction in its prevalence.

Food insecurity may be partially a symptom of limited access to food for low-income individuals. A number of studies, particularly in health and nutrition journals, have found evidence that low-income individuals tend to have lower access to grocery stores (e.g. Franco et al. 2008; Galvez et al. 2008; Zenk et al. 2005). To determine whether this could be a problem for SNAP authorized stores in Ohio, the following section examines their locations.

17 This percentage was calculated by dividing the number of Ohio SNAP participants, obtained from the USDA FNS, by the population estimate provided by the Population Estimates Program from the U.S. Census Bureau.
**B. Change in Number of SNAP Authorized Stores**

The majority of SNAP authorized stores cluster in large cities, as shown in Figure 6.\(^\text{18}\) The largest clusters are in Columbus, Cincinnati, and Cleveland, the three largest cities in Ohio, with sizeable clusters in Akron, Dayton, and Toledo. These clusters are most likely influenced by the overall greater number of stores; these cities have significantly larger populations, and thus a greater number of businesses.

As illustrated in Figure 7, the change in the total number of SNAP authorized stores over the last decade varies substantially by county. Franklin County had the largest total increase of 449 stores, whereas Scioto County had the largest total decrease of 3 stores. Examining the change in Scioto County by store type indicates that while the number of convenience stores increased by nine, the remaining store types decreased: small/medium grocery stores (-8), large grocery stores (-3), and specialty food stores (-1). These changes are counterintuitive, since the proportion of SNAP participants increased by 13%, as shown earlier in Figure 5. In the following section, a more detailed analysis of Scioto and Franklin Counties is conducted to examine why these counties had contrasting results to an increase in SNAP participation.

**C. Detailed Analysis of Franklin, Scioto, and Morgan County**

Franklin County had the largest increase in SNAP authorized stores while Scioto County had the largest decrease, even though both counties had an increase in SNAP participation (11% and 13%, respectively). To examine why these contrasting results may have occurred, SNAP participation and authorized stores are analyzed more closely in this section. Morgan County, which had a food insecurity rate of 20.1% in 2010 (Feeding America 2013), is also included in this detailed analysis. It was one of the five counties with the highest food insecurity

---

\(^{18}\) The Food and Nutrition Service has made the location of SNAP authorized retailers available online, making it possible to enter an address and identify the closest 10, 25, and 50 locations, as well as downloading all the locations by state: [http://www.fns.usda.gov/snap/retailerlocator](http://www.fns.usda.gov/snap/retailerlocator)
Figure 7: Change in Number of SNAP Authorized Stores

Legend
- Decrease
- No Change
- Increase by less than 20
- Increase by 20 to 100
- Increase by over 100

Source: USDA Food and Nutrition Service

Figure 8: Change in Proportion of SNAP Recipients (2000 - 2010)

Source: USDA Food and Nutrition Service and PEP from the U.S. Census Bureau.
Compared to all of Ohio, all three counties had a higher proportion of SNAP participants in 2010, as evident in Figure 8. Although the gap between Franklin County and all of Ohio is negligible in 2000, at 5.2% and 5.4%, respectively, it widened slightly by 2010. Although Morgan County had a higher percentage of SNAP recipients in 2000, because it increased less over the first half of the 21st century, its gap with Franklin County became negligible by 2010. In comparison to Franklin County, Morgan County, and the whole of Ohio, Scioto County had the highest proportion of SNAP recipients through the entire decade. The 11% of the population receiving SNAP in 2000 increased to 23.7% by 2010, almost a quarter of Scioto County’s population.

The increase in the proportion of SNAP recipients in Scioto County occurred as the number of SNAP authorized stores decreased. In response to rising interest in food accessibility, the Economic Research Service of the USDA created a Food Access Research Atlas. Using data provided from the site, it is possible to examine which census tracts have low access to supermarkets and identify which tracts have a poverty rate of 20% or higher, labelled low-income tracts. These maps are provided in the Appendix, and this section uses their data to identify the location of low-income census tracts and examine it alongside the exact location of each SNAP authorized store.

As shown in the Figure 9, 10, and 11, there are large portions of land that are distant from a SNAP authorized store. Many of the stores cluster together, particularly in Scioto and Franklin County. However, whether the tract consists of a large portion of low-income individuals does not appear to be a driving factor. Although a large number of the clusters occur in low-income tracts, particularly in Franklin County, they are also in tracts that do not have a high percentage of low-income individuals. Furthermore, there are large areas of low-income tracts that do not have any SNAP authorized stores, particularly in Morgan County. It is troubling to observe that the county with one of Ohio’s highest rates of food insecurity has such a limited number of SNAP authorized stores, especially considering that every tract has a high percentage of low-income individuals.

Comparing Morgan County in Figure 10 to Figure 13 in the Appendix, it seems contradictory that the two low-income census tracts that supposedly do not have limited food access have either one or no SNAP authorized store. This could indicate that there are non-SNAP authorized supermarkets available. It could also be that the individuals residing in an urban tract live within one mile of an authorized store (10 miles in a rural tract) and that there are large portions of unoccupied land within the tract. Comparing the maps for Franklin and Scioto County with those in the Appendix seems contradictory for certain tracts as well: some of the low-access tracts have clusters of SNAP authorized stores.

The measure of food access created by ERS may contradict food access according to the location of SNAP authorized stores because of differences in store types. While the measurements designed by ERS only measure the distance to a supermarket, the SNAP establishments included in Figure 9, 10, and 11 consider a broader category of stores. The SNAP authorized stores may only consist of convenience stores, but they may also include farmers’ markets and smaller grocery stores, making it difficult to conclusively state which census tracts have limited accessibility to nutritious food. Nevertheless, both measurements indicate some level of limited access in certain areas, indicating a need for further research.

19 The remaining four counties are Adams, Meigs, Highland, and Pike County.
20 This can be found at: http://www.ers.usda.gov/data-products/food-access-research-atlas.aspx#.Uy7IlizmTw.
21 A census tract where the median family income is less than or equal to 80% of the statewide median family income or a metropolitan area that has a median family income less than or equal to 80% of the median family income are also considered low-income tracts. See http://www.ers.usda.gov/data-products/food-access-research-atlas/documentation.aspx#.Uy7nczmkTww for details.
Figure 9: SNAP Authorized Stores in Scioto County (2013)

Source: USDA Food and Nutrition Service

Figure 10: SNAP Authorized Stores in Morgan County (2013)

Source: USDA Food and Nutrition Service

Figure 11: SNAP Authorized Stores in Franklin County (2013)

Source: USDA Food and Nutrition Service
Conclusion

A detailed analysis of Ohio indicates that there may be limited access to SNAP authorized stores in areas with need. These stores exhibit tendencies to cluster, particularly in areas with large populations and not necessarily in areas with a high percentage of poverty. Additional research needs to be conducted to address why the number of SNAP authorized stores might decrease in counties where the proportion of participants increase. Although there may be sufficient access depending on the location of residents, this result seems counterintuitive. Furthermore, it could partially explain why SNAP has an uncertain effect on food insecurity.

Because the number of food insecure individuals is increasing, it is important to examine whether SNAP reduces food insecurity. While there is evidence that the depth and severity is reduced, studies have found mixed results for its effect on the prevalence of food insecurity. Billions of federal funds are being spent on the program; it is important to determine if a policy intervention could improve the efficacy of SNAP and ensure that SNAP is meeting its objective: providing sufficient nutrition assistance to low-income individuals. Further research must be conducted to determine if benefit levels need to be increased or if additional eligibility measures need to be implemented to prevent the circumvention of current eligibility restrictions.

As communities continue to recover from this last recession, further research should be done on access to SNAP authorized stores and SNAP’s effects on food insecurity. This information may have implications for future policies to improve the program and examine its role in the economic recovery. Research on the efficacy of SNAP is important to ensure that any new restrictions improve the recovery process.


A census tract is considered to have low access if the nearest supermarket is further than one-mile from a sizeable number of the population in an urban area, 10 miles in a rural area. See [http://www.ers.usda.gov/data-products/food-access-research-atlas/documentation.aspx#.Uy7nczmKTww](http://www.ers.usda.gov/data-products/food-access-research-atlas/documentation.aspx#.Uy7nczmKTww) for more information.

**Figure 12: Food Access in Scioto County**

Source: USDA Food and Nutrition Service

**Figure 13: Food Access in Morgan County**

Source: USDA Food and Nutrition Service
Figure 14: Food Access in Franklin County

Source: USDA Food and Nutrition Service