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ERS's Updated Food Access Research Atlas Shows an Increase in Low-Income and Low-Supermarket Access Areas in 2015

Statistic: Food Choices & Health

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## ERS's Updated Food Access Research Atlas Shows an Increase in Low-Income and Low-Supermarket Access Areas in 2015

by Alana Rhone and Michele Ver Ploeg



Limited access to healthy and affordable food may impede some Americans from achieving a healthy diet. ERS's Food Access Research Atlas (FARA) provides a measure of neighborhood access to healthy, affordable food for the entire Nation and allows users

to map low-income and low-supermarket access census tracts for 2015 and compare the results with those for 2010. A census tract is a small statistical subdivision of a county that usually contains between 1,200 and 8,000 people but generally averages around 4,000 people.

The FARA mapping tool uses supermarkets, supercenters, and large grocery stores as proxies for stores that sell a wide variety of foods needed for a healthy diet at affordable prices. Two nationwide directories of these types of stores were combined to update the atlas for 2015. Drug stores, dollar stores, convenience stores, military commissaries, and club stores are excluded because these types of stores do not consistently offer a wide variety of healthy foods or they have restrictions on who can shop in the store or charge a membership fee.

Low-income status is determined based on a census tract's poverty rate or median family income using data from the U.S. Census Bureau's 2010-2014 American Community Survey. Low-supermarket access is characterized by the number and share of people at different distances from the nearest supermarket, supercenter, or large grocery store and the number of housing units in the area without access to a vehicle that are more than 0.5 miles from one of these stores. FARA users can map four measures of low-supermarket access based on different combinations of the distance-from-supermarket cut points (more than 0.5 or 1 mile in urban areas or more than 10 or 20 miles in rural areas). This article focuses on one of those measures: Low-Income and Low-Access (LILA) Vehicle Access and 20 Miles. This measure considers a tract to be LILA if it is low-income and contains either a substantial number of households that are more than 0.5 miles from a supermarket and without a vehicle, or if it has a significant number or share of people more than 20 miles from a supermarket, regardless of vehicle availability.

Vehicle availability is an important measure of how readily a household can access a supermarket. From 2010 to 2015, the number of census tracts in the LILA Vehicle Access and 20 Miles category increased by 3.9 percent. The increase is due to both a greater number of low-income census tracts, which may reflect reduced and then stagnating incomes in the post 2007-09 recession period, and more households without a vehicle living more than 0.5 miles from a supermarket.

By 2015, there was a net increase of 412 LILA tracts in the Vehicle Access and 20 Miles category—3,403 that were LILA in 2010 but were no longer LILA in 2015 and 3,815 that became LILA between 2010 and 2015. Of the 3,815 tracts that became LILA, 20 percent (782) were already low access in 2010 but then also became low-income by 2015. Far more tracts, 64 percent (2,425), were already low-income in 2010 but became low access by 2015. The remaining tracts under these parameters, 16 percent (608), had both their incomes and supermarket access status worsen by 2015.

On the other hand, among the 3,403 tracts that were LILA in 2010 but not in 2015, 17 percent (586) saw their incomes improve, 73

percent (2,494) saw their supermarket access improve, and 9 percent (323) saw both access and income improve.

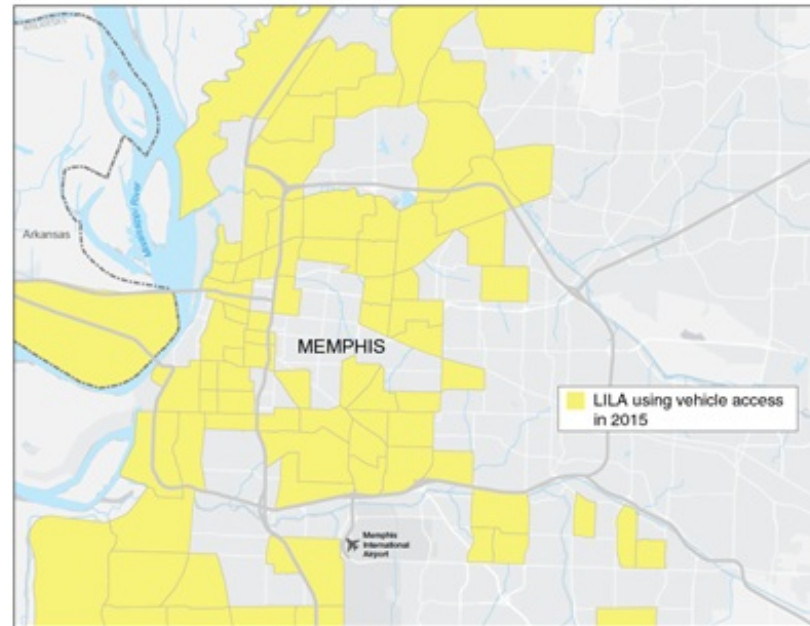
**Between 2010 and 2015, there was a net increase of 412 low-income, low-supermarket access census tracts using the Vehicle Access and 20 Miles definition**

<b>Tracts that remained LILA Vehicle Access and 20 Miles from 2010 to 2015</b>	<b>7,054</b>
LILA in 2015 but not in 2010:	
Low income, but not low access, in 2010; became low access in 2015	2,425
Low access, but not low income, in 2010; became low income in 2015	782
Not low access nor low income in 2010; became low income and low access in 2015	608
<b>New LILA Vehicle Access and 20 Miles tracts</b>	<b>3,815</b>
LILA in 2010 but not in 2015:	
Low income, but no longer low access, in 2015	2,494
Low access, but no longer low income, in 2015	586
Not low access nor low income in 2015	323
<b>No longer LILA Vehicle Access and 20 Miles tracts</b>	<b>3,403</b>
<b>Total LILA Vehicle Access and 20 Miles tracts in 2015</b>	<b>10,869</b>
Total U.S. populated census tracts	72,531
LILA = Low income, low food access.	
Source: USDA, Economic Research Service calculations using data from the 2010 Decennial Census and the 2010-2014 American Community Survey.	

The yellow shaded areas on the map of Memphis in Shelby County, TN, illustrate low-income and low-access tracts with a substantial

number of vehicle-less households more than 0.5 miles from the nearest supermarket in 2015. Overall, 32 percent of Shelby County's population (298,386 people) and 5 percent of its households (17, 046 households) resided in low-income tracts and lived more than 0.5 miles from a supermarket and reported no access to a vehicle. Nationally, 1.8 percent of all households that lived in LILA census tracts in 2015 were without a vehicle and more than 0.5 miles from a supermarket.

**In 2015, many census tracts in the Memphis, TN, area were low income, with a substantial number of vehicle-less households residing more than 0.5 miles from the nearest supermarket**



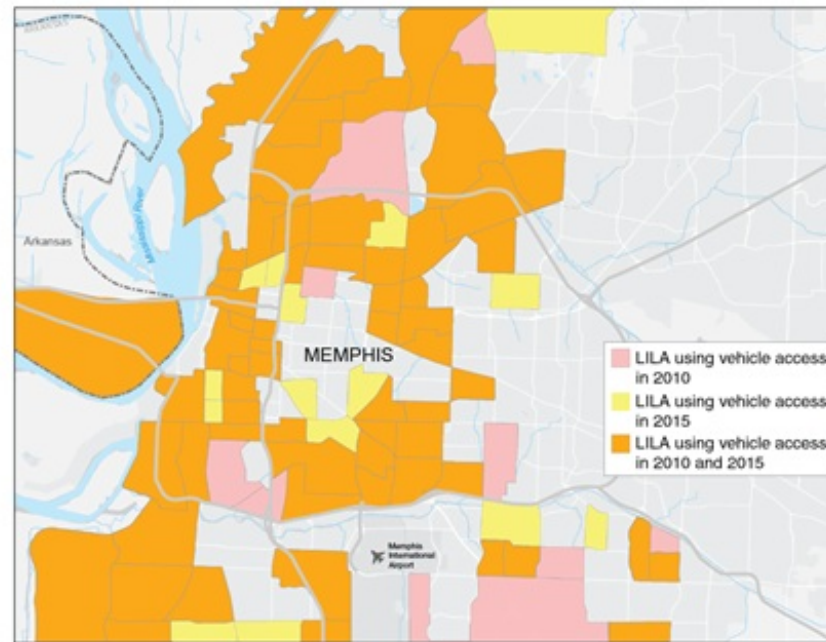
Note: LILA using vehicle access = Low-income census tracts where at least 100 households do not have a vehicle and live more than 0.5 miles from the nearest supermarket.  
Source: USDA, Economic Research Service, Food Access Research Atlas.

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Changes in LILA census tracts between 2010 and 2015 reveal that both income and vehicle access worsened in Shelby County. In the map below, areas that are low-income and low-access with a significant number of vehicle-less households more than 0.5 miles from the nearest supermarket are indicated using rose shading for 2010, yellow shading for 2015, and orange shading to indicate such areas in both years. The number of census tracts in Shelby County that are low-income and low-access with a significant number of vehicle-less households more than 0.5 miles from the nearest supermarket increased from 76 in 2010 to 82 in 2015. Furthermore, the

number of vehicle-less households more than 0.5 miles from the nearest supermarket increased 5 percent over this period.

**The number of low-income, low-supermarket access census tracts in the Memphis, TN, area rose from 2010 to 2015**



Note: LILA using vehicle access = Low-income census tracts where at least 100 households do not have a vehicle and live more than 0.5 miles from the nearest supermarket.  
Source: USDA, Economic Research Service, Food Access Research Atlas.

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This article is drawn from...

***Low-Income and Low-Supermarket-Access Census Tracts, 2010-2015***, by Alana Rhone, Michele Ver Ploeg, Chris Dicken, Ryan Williams, and Vince Breneman, ERS, January 2017

***Food Access Research Atlas***, by Michele Ver Ploeg, Vince Breneman, and Alana Rhone, USDA, Economic Research Service, May 2017



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